

engineering

management

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sultants:



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approv							

Taunton State
Hospital
Food Service
Improvements
EHS1801-TR1

60 hodges avenue taunton, ma 02780

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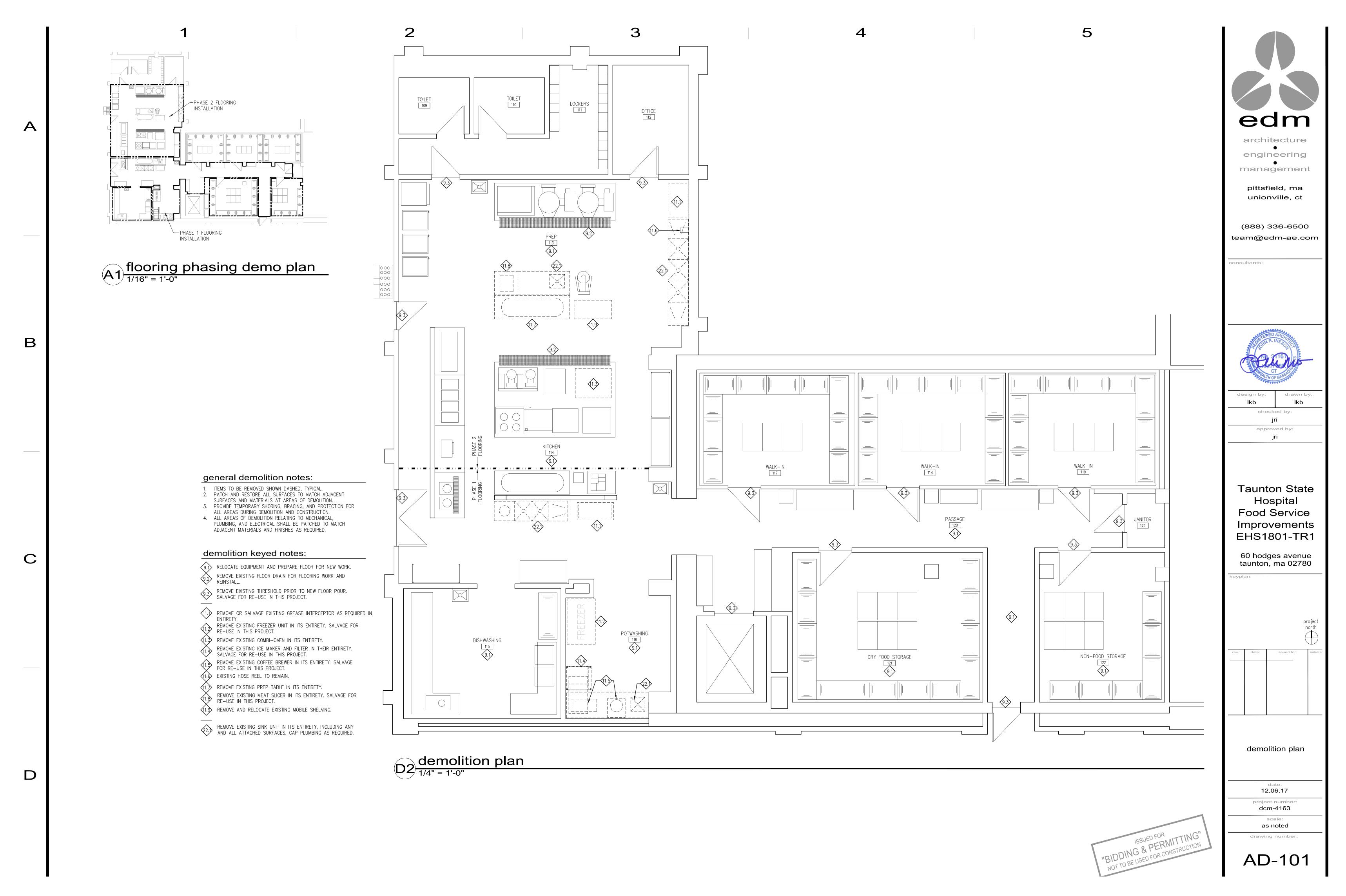
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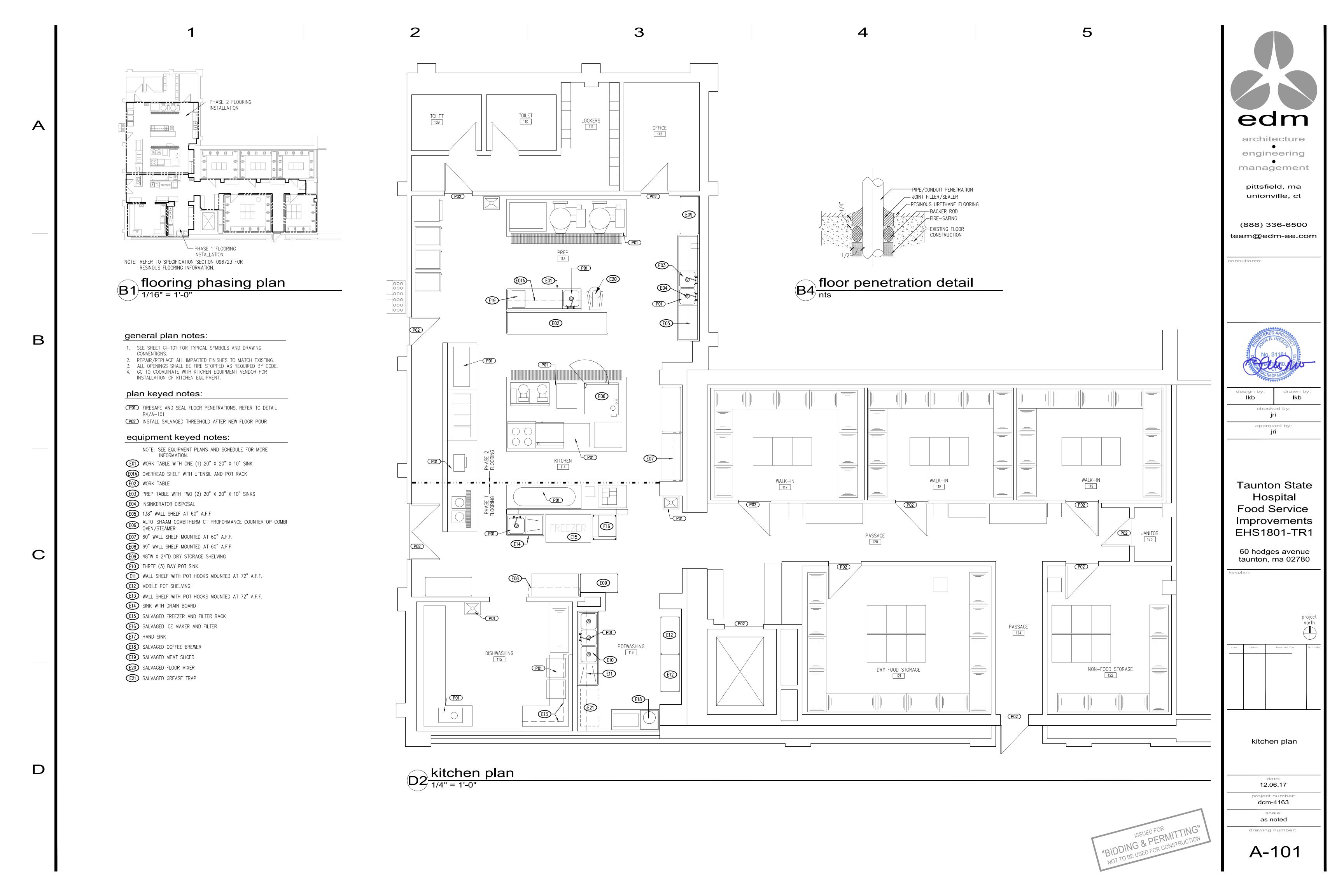
general information

12.06.17 project number dcm-4163

scale:
as noted
drawing number:

GI-101





general plumbing legend: POINT OF DISCONNECT POINT OF NEW CONNECTION

SHEET SPECIFIC DEMOLITION KEYED NOTES SHEET SPECIFIC NEW WORK KEYED NOTES EQUIPMENT CALLOUT REQUIRING ELECTRICAL SERVICE EQUIPMENT CALLOUT NOT REQUIRING ELECTRICAL SERVICE MOTOR ACTUATOR CO CLEANOUT FLOOR CLEANOUT

ROOF DRAIN

piping legend

MOTORIZED OR CONTROL VALVE

RELIEF VALVE (PRESSURE OR T&P)

SOLENOID VALVE

—— STRAINER W/ BLOWOUT

— MIXING VALVE

——— DIRECTION OF FLOW

—— FLOW STARTING ON THIS SHEET

PRESSURE GUAGE

THERMOMETER

FLEXIBLE CONNECTOR

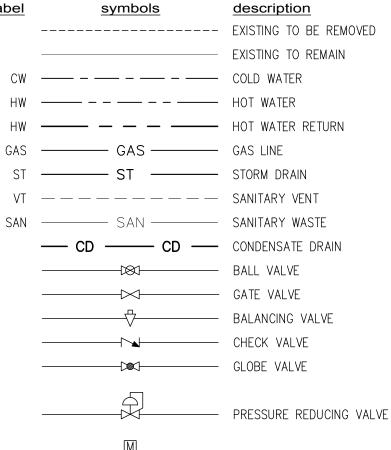
END CAP OR PLUG

LOW WATER CUT OUT

WATER HAMMER ARRESTOR

FLOW ENDING ON THIS SHEET

----- PIPE BREAK



BACKFLOW PREVENTER

REDUCER

─||| BUTTERFLY VALVE

plumbing insulation notes:

PROVIDE THERMAL INSULATION ON ALL HOT & COLD WATER PIPING. INSULATION SHALL BE JACKETED FIBERGLASS INSULATION WITH MANUFACTURES APPROVED ADHESIVES, SEALERS, AND COATINGS. ALL MATERIALS SHALL NOT EXCEED 25 FOR FLAME SPREAD OR 50 FOR SMOKE DEVELOPMENT AND HAVE A THERMAL CONDUCTIVITY NOT EXCEEDING 0.27 Btu ·INCH/H ·FT2 ·F AT A MEAN TEMPERATURE OF 75°F. UNLESS OTHERWISE REQUIRED BY LOCAL AUTHORITY OR ENERGY CODE(S) MINIMUM INSULATION THICKNESS SHALL BE 1-INCH FOR PIPES 2-INCH DIAMETER AND SMALLER, 1½-INCH FOR PIPES LARGER THAN 2-INCH

general electrical notes:

- 1. ALL WIRING SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70).
- 2. THE CONTRACTOR SHALL IDENTIFY POWER SOURCES IN THE FIELD.
- 3. INSTALL AND CONNECT ELECTRICAL CONTROL DEVICES FURNISHED BY THE
- MANUFACTURER, UNLESS SPECIFIED TO BE FACTORY MOUNTED.
- 4. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT PRIOR TO INSTALLATION AND COORDINATE REQUIREMENTS WITH ELECTRICAL TRADE

general plumbing notes

- 1. WORK, MATERIALS, AND EQUIPMENT SHALL COMPLY WITH THE MOST RESTRICTIVE OF LOCAL, STATE, AND FEDERAL AUTHORITIES' CODES AND ORDINANCES OR THESE PLANS AND SPECIFICATIONS. AS A MINIMUM, THE INSTALLATION SHALL COMPLY WITH THE CURRENT EDITIONS IN EFFECT 30 DAYS PRIOR TO THE RECEIPT OF BIDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY PERMITS AND BE RESPONSIBLE FOR PAYMENT OF SAME ON ALL WORK WITHIN THIS CONTRACT. CONTRACTOR SHALL BE RESPONSIBLE TO MAKE CHANGES AS REQUESTED BY THE AHJ.
- 2. CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL WORK (HVAC, PLUMBING AND FIRE PROTECTION) ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
- 3. ALL FIELD CONDITIONS SHALL BE VERIFIED PRIOR TO BIDDING, PROPOSING, OR BEGINNING ANY WORK. CHANGES RESULTING FROM CONDITIONS ARISING IN THE FIELD ARE TO BE MADE AT NO ADDITIONAL COST TO THE OWNER. COORDINATE ALL WORK OR ADJUST SAME TO THAT OF OTHER TRADES AND TO COMPENSATE FOR EXISTING CONDITIONS IN ORDER THAT CONFLICTS IN SPACE LOCATIONS DO NOT OCCUR. CONTRACTOR SHALL COORDINATE AND MAKE ACCOMMODATIONS FOR CONFLICTS AT NO COST TO THE OWNER.
- 4. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND/OR OTHER SUBMITTALS ON EQUIPMENT, COMPONENTS, AND CONTROLS TO BE INSTALLED OR PROVIDED. NO WORK MAY BEGIN ON ANY SEGMENT OF THIS PROJECT UNTIL SUBMITTALS HAVE BEEN APPROVED FOR CONFORMITY WITH DESIGN INTENT. WHEN MANUFACTURER'S CUT SHEETS APPLY TO A PRODUCT SERIES RATHER THAN A SPECIFIC PRODUCT, THE DATA SPECIFICALLY APPLICABLE TO THE PROJECT SHALL BE HIGHLIGHTED OR CLEARLY INDICATED BY OTHER MEANS. EACH SUBMITTED PIECE OF LITERATURE AND DRAWING SHALL CLEARLY REFERENCE THE SPECIFICATION AND/OR DRAWING THAT THE SUBMITTAL IS TO COVER. GENERAL CATALOGS SHALL NOT BE ACCEPTED AS CUT SHEETS TO FULFILL SUBMITTAL REQUIREMENTS. SELECT AND SHOW SUBMITTAL QUANTITIES APPROPRIATE TO SCOPE OF WORK. SUBMITTAL APPROVAL DOES NOT RELIEVE CONTRACTOR OF RESPONSIBILITY TO SUPPLY SUFFICIENT QUANTITIES TO COMPLETE WORK.
- 5. IT IS THE INTENT OF THE CONTRACT DRAWINGS AND SPECIFICATIONS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION. ALL MATERIALS SHALL BE OF FIRST QUALITY AND SIMILAR TO EXISTING WHERE INTERFACING.
- 6. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PLUMBING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE. ALL MATERIAL, WORK, INCIDENTAL ACCESSORIES, OR OTHER DETAILS NOT SHOWN BUT NECESSARY TO MAKE THE WORK COMPLETE AND PERFECT, AND IN ALL RESPECTS READY FOR OPERATION, EVEN IF NOT SPECIFIED, ARE TO BE PROVIDED AT NO COST TO THE OWNER.
- 7. ALL WORK SHALL BE PERFORMED BY QUALIFIED TRADES-PEOPLE IN ACCORDANCE WITH REQUIREMENTS OF GOVERNING CODES AND ACCEPTED PRACTICES.
- 8. INSTALL ALL PLUMBING EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
- 9. CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY CLEANUP AND THE PROPER LEGAL DISPOSAL OF ALL DEMOLISHED EQUIPMENT AND DEBRIS CREATED BY
- LEAVING HIS WORK IN A PERFECT CONDITION AND THE AREA CLEAN AND READY FOR OCCUPATION. 11. COORDINATE CONSTRUCTION OF ALL PLUMBING WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL WORK, ETC., SHOWN ON OTHER CONTRACT

10. UPON COMPLETION OF THE WORK UNDER THIS CONTRACT, THE CONTRACTOR SHALL REMOVE ALL TOOLS, APPLIANCES, SURPLUS MATERIALS, AND SCRAP

- DOCUMENT DRAWINGS.
- 12. WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.
- 13. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS.
- 14. COORDINATE AND PROVIDE ALL PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL PIPING DIMENSIONS BEFORE FABRICATION.
- 15. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS AND SHALL HAVE THE APPROVAL OF THE ENGINEER BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS.
- 16. ALL DUCTWORK, PIPING AND EQUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH GENERAL CONTRACTOR. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES, OR JOIST GIRDERS SHALL BE AT PANEL POINTS. PROVIDE BEAM CLAMPS MEETING MSS STANDARDS. WELDING TO STRUCTURAL MEMBERS SHALL NOT BE PERMITTED. DO NOT SUPPORT PIPING FROM ANOTHER PIPE, DUCTWORK OR CONDUIT. DO NOT SUPPORT ANY ITEM FROM METAL ROOF DECK. ALL SUPPORTS SHALL PROVIDE A VIBRATION FREE INSTALLATION.
- 17. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE LOCATION AND SIZES OF ALL REQUIRED PENETRATIONS IN WALLS, CEILINGS, FLOORS, AND ROOF WITH GENERAL CONTRACTOR AND ALL OTHER TRADES INVOLVED. ALL PENETRATIONS SHALL BE FIRE STOPPED AS REQUIRED BY CODE.
- 18. WHEN WORK IS SUBCONTRACTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE SUBCONTRACTORS AND THE ASSOCIATED CONTRACTS. WHEN DISCREPANCIES ARISE PERTAINING TO WHICH CONTRACTOR PROVIDES A PARTICULAR ITEM OF THE CONTRACT OR CONTRACTOR PROVIDES FINAL CONNECTIONS FOR A PARTICULAR ITEM OF THE CONTRACT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR, WHOSE DECISION SHALL BE
- 19. UNLESS OTHERWISE NOTED, ALL PIPING IS OVERHEAD, TIGHT TO UNDERSIDE OF STRUCTURE OR SLAB, WITH SPACE FOR INSULATION IF REQUIRED.
- 20. INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, AND OTHER APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.
- 21. ALL VALVES SHALL BE INSTALLED SO THAT VALVES REMAIN IN SERVICE WHEN EQUIPMENT OR PIPING ON EQUIPMENT SIDE OF VALVE IS REMOVED.
- 22. ALL BALANCE VALVES AND BUTTERFLY VALVES SHALL BE PROVIDED WITH POSITION INDICATORS AND MAXIMUM ADJUSTABLE STOPS (MEMORY STOPS).
- 23. ALL VALVES (EXCEPT CONTROL VALVES) AND STRAINERS SHALL BE FULL SIZE OF PIPE BEFORE REDUCING SIZE TO MAKE CONNECTIONS TO EQUIPMENT AND CONTROLS.
- 24. INSTALL ALL PIPE WITHOUT FORCING OR SPRINGING.
- 25. ALL PIPING SHALL CLEAR DOORS AND WINDOWS.
- 26. ALL VALVES SHALL BE ADJUSTED FOR SMOOTH AND EASY OPERATION.
- 27. PROVIDE CLEANOUTS IN SANITARY AND STORM DRAINAGE SYSTEMS AT END OF RUNS, AT CHANGES IN DIRECTION GREATER THAN 45 DEGREES, NEAR THE BASE OF STACKS, EVERY 50 FEET IN HORIZONTAL RUNS AND ELSEWHERE AS INDICATED.
- 28. ALL CLEANOUTS SHALL BE FULL SIZE OF PIPE FOR PIPE SIZES 6 INCHES AND SMALLER AND SHALL BE 6 INCHES FOR PIPE SIZES LARGER THAN 6 INCHES.
- 29. ALL WORK IS TO BE FREE OF DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF NO LESS THAN ONE YEAR, UNLESS OTHERWISE INDICATED, FROM THE DATE OF FINAL ACCEPTANCE. ALL DEFECTS WHICH DEVELOP OR ARE DISCOVERED WITHIN THIS PERIOD WILL BE REPAIRED BY THE CONTRACTOR, TO THE SATISFACTION OF THE OWNER, AND AT NO ADDITIONAL COST TO THE OWNER.
- 30. ALTHOUGH ATTEMPTS HAVE BEEN MADE TO IDENTIFY EXISTING EQUIPMENT LOCATIONS, PIPE ROUTING AND SIZES WITH THE USE OF EXISTING DRAWINGS AND FIELD OBSERVATIONS, PC SHALL FIELD VERIFY ALL EXISTING INFORMATION. REPORT ANY DISCREPANCIES TO THE ARCHITECT OR ENGINEER. NOTE ALL DISCREPANCIES ON THE AS-BUILT DRAWINGS.
- 31. COORDINATE ALL WORK WITH THE PHASING OF THE PROJECT. SOME SERVICES MUST REMAIN ACTIVE TO SERVE OCCUPIED SPACES DURING CONSTRUCTION. SCHEDULE ALL SERVICE SHUTDOWNS WITH OWNER AND/OR CONSTRUCTION MANAGER.
- 32. UNLESS NOTED OTHERWISE ALL SERVICES INDICATED AS BEING REMOVED SHALL BE REMOVED BACK TO THE MAIN AND CAPPED. IDENTIFY ALL CAPPED SERVICES. DEAD-END PIPING IS NOT PERMITTED. REMOVE ALL PREVIOUSLY ABANDONED PIPING, SUPPORT, ETC ENCOUNTERED ABOVE CEILINGS.
- 33. THE OWNER SHALL HAVE THE OPTION OF RETAINING ANY OR ALL REMOVED FIXTURES OR EQUIPMENT FOR SALVAGE. ALL REMOVED EQUIPMENT AND FIXTURES THAT ARE NOT RETAINED BY THE OWNER, SHALL BE DISPOSED OF BY THE PC.
- 34. REFER TO ARCHITECTURAL INTERIOR ELEVATIONS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
- 35. HOLD ALL SUSPENDED SANITARY AND STORM SEWER PIPING HIGH AS POSSIBLE, TO DECK BETWEEN BEAMS, AND TIGHT TO STEEL STRUCTURE. PROVIDE ANY AND ALL OFFSETS AND EFFORT REQUIRED TO FACILITATE DUCT ROUTING. COORDINATE CLOSELY WITH THE M.C.
- 36. ALL SANITARY STACKS, VENT STACKS, AND STORM INTERIOR DOWNSPOUTS SHALL BE INSTALLED TIGHT TO STRUCTURE AT LOCATIONS DROPPING ALONG SIDE COLUMNS, CORNERS, ETC.
- 37. PLUMBING SYSTEM PIPING SHALL NOT BE INSTALLED IN ELEVATOR SHAFTS, ELEVATOR MACHINE ROOMS, ELECTRICAL ROOMS AND INFORMATION TECHNOLOGY (LOW VOLTAGE) ROOMS.
- 38. BULLHEAD CONNECTIONS IN PIPING ARE PROHIBITED.
- 39. SANITARY AND VENT PIPING INDICATED IS ABOVE CEILING, UNLESS OTHERWISE NOTED. REFER TO THE PLUMBING FIXTURE CONNECTION SCHEDULE FOR FIXTURE WASTE AND VENT PIPE SIZING.
- 40. ALL VALVES MUST BE ACCESSIBLE. IF LOCATED ABOVE DRYWALL CEILING OR BEHIND FINISHED WALLS, PROVIDE ACCESS DOOR. COORDINATE ALL ACCESS DOOR LOCATIONS WITH ARCHITECT AND/OR GC.
- 41. INSTALL BRANCH WATER PIPING HORIZONTALLY WITHIN WALL FOR FIXTURE GROUPINGS. REFER TO FIXTURE CONNECTION SCHEDULE FOR SIZING REQUIREMENTS.
- 42. UNLESS NOTED OTHERWISE ALL VERTICAL PIPING DROPS TO FIXTURES, HOSE BIBS, FAUCETS, MUST BE CONCEALED IN THE WALL.
- 43. INSULATE ALL SUSPENDED SANITARY SEWER PIPING AND TRAPS SERVING WALL BOX DRAINS, FLOOR, OR HUB DRAINS RECEIVING ICE MACHINE INDIRECT WASTE. EXTEND INSULATION FROM TRAP ON HORIZONTAL PIPE TO THE VERTICAL DROP.
- 44. ATTENTION IS CALLED TO ROUGH-IN REQUIREMENTS FOR FIXTURES INSTALLED IN CASEWORK FURNISHED BY ANOTHER DIVISION. THE PC SHALL PROVIDE ROUGH-INS OUT OF WALL WITH ENOUGH LENGTH TO ALLOW FOR SUPPLY STOPS AND WASTES TO HAVE ESCUTCHEONS AT THE REAR BACKING OF THE CASEWORK AND NOT AT THE WALL ACCESSIBLE THROUGH FIELD CUT HOLES IN THE CASEWORK BACKING.





architecture engineering

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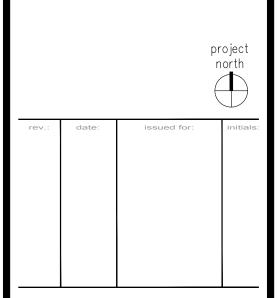
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PHC PHC

Taunton State Hospital Food Service Improvements EHS1801-TR1

60 hodges avenue taunton, ma 02780



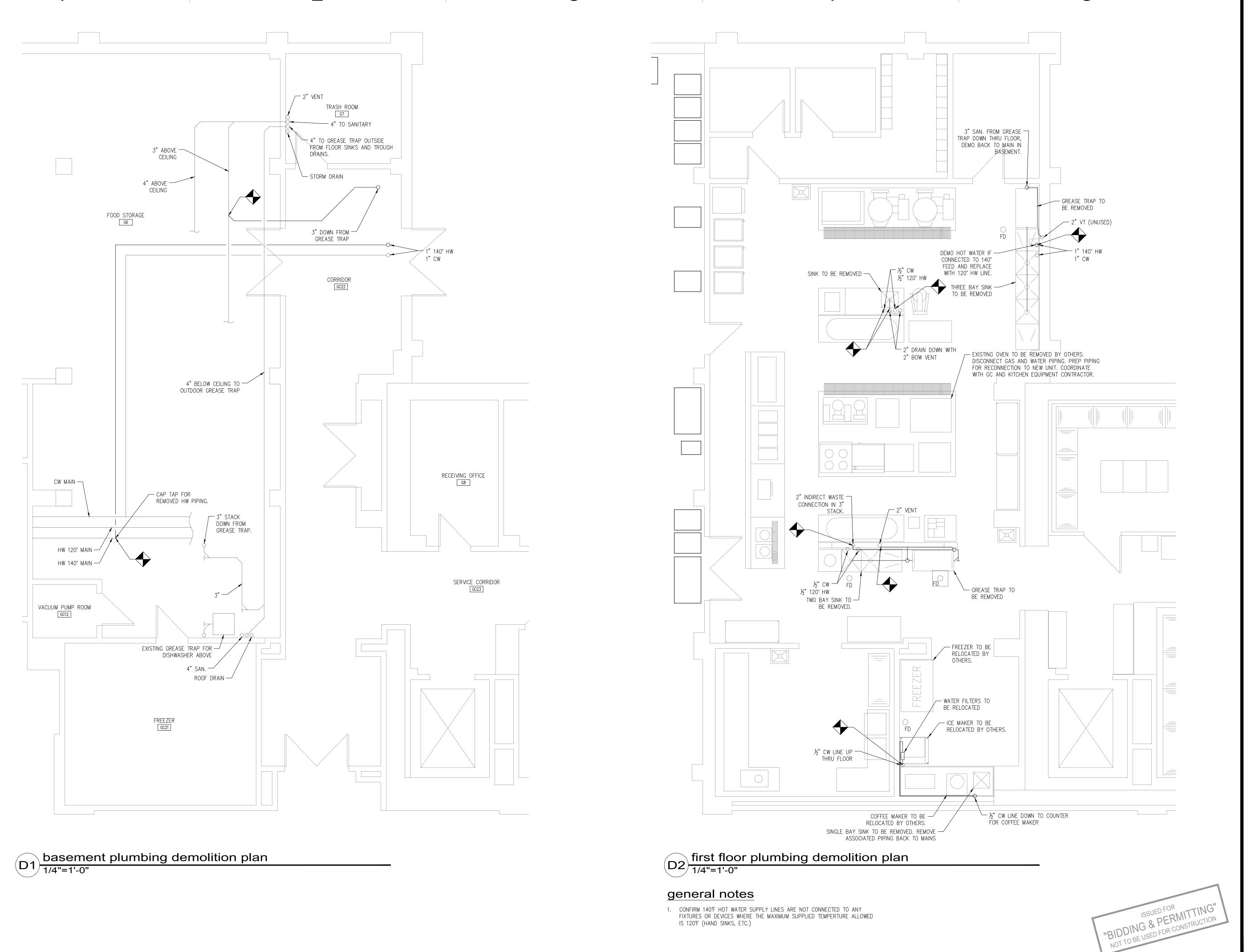
general notes & legends

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as noted

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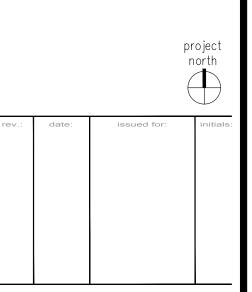
checked by:
MP

approved by:

Taunton State
Hospital
Food Service
Improvements
EHS1801-TR1

60 hodges avenue taunton, ma 02780

kevnlan:



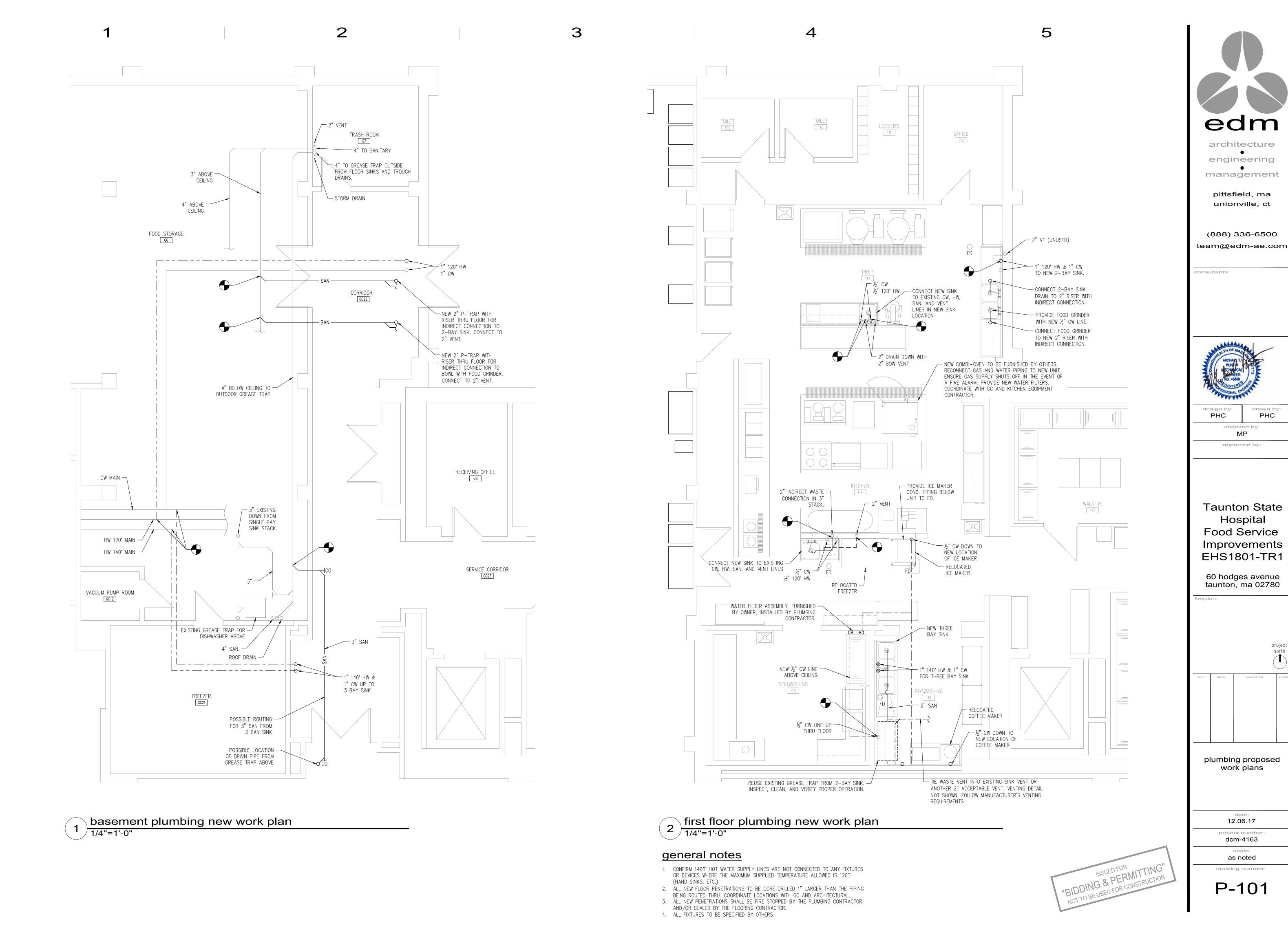
plumbing demolition plans

12.06.17

dcm-4163

as noted
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PD-101



PHC

CARD READER

ONE LINE LEGEND

— CIRCUIT BREAKER

------ NEW WIRE OR DEVICE

____LV LOW VOLTAGE WIRING

FUSED DISCONNECT SWITCH

 $\frac{1}{XXXAT}$ = SIZE

ONE-LINE DIAGRAM FOR

COMBINATION MAGNETIC STARTER

MAGNETIC STARTER

- NIGHT LIGHT

- FIXTURE TYPE

- SWITCH DESIGNATION

EMERGENCY FIXTURE

 \bigcirc HC = HANDICAP EXIT SIGN.

= EXIT SIGN - SINGLE FACE, TOP MOUNTED,

= EXIT SIGN - SINGLE FACE, WALL MOUNTED,

 \perp with directional arrow (X) as indicated on

WITH DIRECTIONAL ARROW (X) AS INDICATED ON

VOLTAGE PANELBOARD, REFER TO

SPECIFICS

PHASE

— FUSE

____ SWITCH

TYPICAL FIXTURE

DEMOLITION NOTES

SERVICES REMAINING IN THE BUILDING.

CONDITIONS ENCOUNTERED DURING DEMOLITION.

REMAIN SHALL BE LEFT IN A CODE COMPLIANT CONDITION.

—— UIGHT LINE DENOTES EXISTING EQUIPMENT.

IS AFFECTED.

PLATES NOT PERMITTED.

EQUIPMENT AS SHOWN.

KEYED NOTES

GENERAL NOTES

WITH THOSE DRAWINGS.

(NFPA 70-2017).

XM EXISTING EQUIPMENT TO REMAIN.

EXISTING CIRCUIT IN ORIGINAL LOCATION.

PATCH WALL. BLANK PLATES NOT PERMITTED.

SHEET SPECIFIC DEMOLITION KEYED NOTES

SHEET SPECIFIC NEW WORK KEYED NOTES

FOLLOW THE GUIDANCE OF THE ENGINEER.

ARCHITECT PRIOR TO IMPLEMENTATION.

CONDITIONS, UNLESS OTHERWISE INDICATED.

AREAS AND OCCUPANTS FROM DAMAGE AND INJURY.

XL NEW LOCATION OF RELOCATED EXISTING EQUIPMENT.

3

1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE INTEGRITY AND

EQUIPMENT CIRCUITING ACCORDING TO THE NATIONAL ELECTRIC CODE. ALL DAMAGED

RENOVATED AREAS BUT SERVES OTHER AREAS NOT BEING RENOVATED. EXTEND THESE

CIRCUITS AS MAY BE NECESSARY TO THE EXISTING PANELBOARDS. UTILIZE SPARE CIRCUIT

ARC-FLASH RE-CALCULATION/RE-CERTIFICATION SHALL BE THE RESPONSIBILITY OF THE

6. THE ELECTRICAL DEMOLITION PLANS INDICATE GENERAL INTENT AND ARE NOT INTENDED TO SHOW ALL COMPONENTS AND ITEMS TO BE REMOVED OR RETAINED. THE ELECTRICAL

FAMILIAR WITH THE ACTUAL WORKING CONDITIONS AND EXTENT OF WORK. DEVICES AND

EQUIPMENT LOCATED ON WALLS AND/OR CEILINGS DESIGNATED TO BE REMOVED SHALL BE

DISCONNECTED AND MADE SAFE. THE ELECTRICAL CONTRACTOR SHALL IMMEDIATELY NOTIFY

CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMISSION OF THEIR BID TO BECOME

THE OWNERS REPRESENTATIVE AND ARCHITECT OF ANY UNANTICIPATED OR HIDDEN

7. THE ELECTRICAL CONTRACTOR SHALL CIRCUIT TRACE AND LABEL ALL EXISTING BRANCH

8. THE ELECTRICAL CONTRACTOR SHALL IDENTIFY ALL BRANCH CIRCUITS, FEEDERS AND SYSTEM COMPONENTS WHICH ARE TO REMAIN WITHIN THE AREA OF DEMOLITION SCOPE.

9. THE ELECTRICAL CONTRACTOR SHALL DE-ENERGIZE AND REMOVE ALL CONDUCTORS AND

OTHERS. ALL CIRCUIT BREAKERS ASSOCIATED WITH THE DEMOLITION SHALL BE

RACEWAYS WITHIN THE AREA OF DEMOLITION SCOPE TO THEIR POINT OF ORIGIN. ITEMS

DE-ENERGIZED, TRIPPED TO THE "OFF" POSITION AND RE-LABELED AS SPARE UNLESS

10. THE ELECTRICAL CONTRACTOR SHALL TEMPORARILY SUPPORT ALL ITEMS TO REMAIN THAT

ARE AFFECTED BY THE DEMOLITION OF BUILDING STRUCTURAL COMPONENTS (WALLS,

CEILINGS, PARTITIONS, ECT.). CONTRACTOR SHALL TEMPORARILY SUPPORT ITEMS AND

SHALL PROVIDE PERMANENT SUPPORTS WHEN FINALIZED STRUCTURES ARE IN PLACE.

X EXISTING EQUIPMENT TO BE REMOVED. CIRCUIT SHALL BE PULLED BACK FROM NEXT

ACTIVE OUTLET/BACK TO PANEL. REMOVE JUNCTION BOXES, AND PATCH WALL. BLANK

XN EXISTING EQUIPMENT TO BE REMOVED AND NEW EQUIPMENT AS SPECIFIED INSTALLED ON

XE EXISTING DEVICE TO BE REMOVED, OUTLET BLANKED AND CIRCUIT EXTENDED TO NEW

XR EXISTING EQUIPMENT TO BE REMOVED AND RELOCATED. REMOVE JUNCTION BOXES, AND

THE FOLLOWING GENERAL NOTES APPLY TO ALL DRAWINGS AND TRADES ASSOCIATED

ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS, AND/OR THE DESIGN INTENT

LIMITED TO, NFPA 72-2010, IBC 09 WITH MASS AMMENDMENTS, UL, SMACNA, OSHA, AND NEC

THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS FAILURE TO OBTAIN AND/OR

G-1 THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH

G-2 ALL WORK SHALL CONFORM TO ALL FEDERAL CODES AND STANDARDS INCLUDING, BUT NOT

G-3 CONTRACTOR AND ALL SUBCONTRACTORS SHALL PROTECT THE WORK SITE, SURROUNDING

CONTRACTOR AND ALL SUBCONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE

ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND

G-5 ALL DRAWINGS ARE INTENDED TO SHOW THE GENERAL ARRANGEMENT, DESIGN INTENT AND

G-6 THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS (AS-BUILT OR OTHERWISE)

BEFORE COMMENCING FABRICATION, AND/OR ORDERING MATERIALS.

G-7 DETAILS SHOWN ON ANY DRAWING ARE TO BE CONSIDERED TYPICAL FOR ALL SIMILAR

ARCHITECT BEFORE PROCEEDING WITH THE AFFECTED WORK. ANY PROPOSED CHANGES,

CONTRACT DOCUMENTS. ALL DRAWINGS OF ANY PARTICULAR TRADE SHALL BE USED IN

CONJUNCTION WITH DRAWINGS OF ALL OTHER TRADES TO COORDINATE ALL CONSTRUCTION.

VARIATIONS, OR SUBSTITUTIONS MUST BE REVIEWED AND ACCEPTED BY THE ENGINEER AND

EXTENT OF THE WORK. THEY SHALL BE CONSIDERED PARTLY DIAGRAMMATIC. THEY ARE

NOT INTENDED TO BE SCALED FOR ROUGHING-IN MEASUREMENTS OR TO SERVE AS SHOP

DARK DASHED LINE DENOTES DEMOLITION EQUIPMENT.

IDENTIFIED FOR DEMOLITION SHALL NOT BE ABANDONED IN PLACE. RACEWAYS THAT ENTER

MASONRY WALLS AND FLOORS SHALL BE CUT FLUSH AT THE SURFACE FOR PATCHING BY

OTHERWISE NOTED. NEW TYPED UPDATED CIRCUIT DIRECTORIES SHALL ALSO BE PROVIDED.

CIRCUITS AND FEEDERS WITHIN OR ASSOCIATED WITH THE DEMOLITION SCOPE, PRIOR TO

DE-ENERGIZING AND DISCONNECTION. ALL CIRCUITS WITHIN PANELBOARDS, LOAD CENTERS, MOTOR CONTROL CENTERS AND SWITCHBOARDS IDENTIFIED FOR REMOVAL SHALL BE

TRACED AND FIELD LABELED TO ENSURE THAT NO AREA OUTSIDE THE DEMOLITION SCOPE

THERE SHALL BE NO INTERRUPTION OF SERVICE TO ANY AREA OUTSIDE THE SCOPE LIMITS

WITHOUT WRITTEN APPROVAL FROM THE OWNERS REPRESENTATIVE. EXISTING EQUIPMENT TO

2. EXISTING BRANCH CIRCUITS SHALL BE EXTENDED AND CONNECTED TO ALL EXISTING

3. RECONNECT ALL EXISTING CIRCUITING WHICH ORIGINATES OR PASSES THROUGH THE

4. DEMOLITION WORK SHALL BE DONE BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK CONCERNING EXISTING EQUIPMENT AND

5. IF APPLICABLE, ANY CHANGES TO THE ELECTRICAL SYSTEM WHICH NECESSITATE AN

RELOCATED EQUIPMENT, AS REQUIRED FOR A COMPLETE WORKING SYSTEM.

WIRING OR WIRING FOUND TO BE NONFUNCTIONAL SHALL BE REPLACED.

CONDITION OF THE EXISTING BRANCH CIRCUIT WIRING WHICH IS TO BE REUSED FOR NEW

2. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT PRIOR TO INSTALLING ANY CONDUIT AND/OR CABLE. IF ELECTRICAL REQUIREMENTS DIFFER FROM THOSE INDICATED, OR IF ADDITIONAL EQUIPMENT IS REQUIRED BY CODE, INFORM THE ENGINEER.

3. WIRING FOR ALL SINGLE PHASE CIRCUITS, 20A OR SMALLER, SHALL BE A MINIMUM OF 2#12 & 1#12 GND in $\frac{3}{4}$ " CONDUIT, SEE TABLES FOR REQUIRED INCREASED SIZES FOR LONGER RUNS. CIRCUITS FOR DOUBLE SWITCHED LIGHT FIXTURES SHALL INCLUDE ADDITIONAL SWITCHED CONDUCTOR(S) AS REQUIRED.

4. MOUNTING HEIGHTS GIVEN FOR ALL WIRING DEVICES (WALL SWITCHES, RECEPTACLES, ETC.), FIRE ALARM DEVICES, TELEPHONE EQUIPMENT, SPEAKERS AND LIGHT FIXTURES ARE TO THE CENTERLINE OF THE JUNCTION BOX USED TO MOUNT THE DEVICE, UNLESS OTHERWISE

5. CIRCUIT WIRING INDICATED ON DRAWINGS IS SCHEMATIC IN NATURE AND SHALL BE ROUTED IN THE FIELD, UNLESS OTHERWISE NOTED.

6. COORDINATE WITH GSA PROJECT MANAGER ON FIXTURES AND EQUIPMENT TO BE SALVAGED.

7. PROVIDE AND ENSURE FIREPROOFING OF ALL CONDUIT, CABLING AND ANY OTHER ELECTRICAL DEVICES THROUGH FIRE RATED ASSEMBLIES.

8. PROVIDE PULL STRINGS IN ALL CONDUIT SYSTEMS LEFT FOR USE BY OTHERS.

9. PROVIDE EXPANSION FITTINGS IN CONDUIT RISERS FROM ALL EXTERIOR UNDERGROUND CONDUITS TO FIXED EQUIPMENT OR CONDUIT FITTINGS AND PROVIDE FLEXIBLE CONNECTIONS TO ANY EQUIPMENT SUBJECT TO SETTLEMENT OR FROST HEAVES.

10. CONNECT EXIT AND EMERGENCY LIGHTING UNITS TO LOCAL LIGHTING CIRCUIT, AHEAD OF SWITCHING, OR TO LOCAL NIGHT LIGHT CIRCUIT.

11. ALL CONDUIT AND CABLE WIRING SHALL BE CONCEALED IN WALLS OR ABOVE HUNG CEILING. NO EXPOSED WIRING OR CONDUITS TO BE INSTALLED UNLESS SPECIFICALLY NOTED (I.E.: AREAS WITHOUT HUNG CEILINGS).

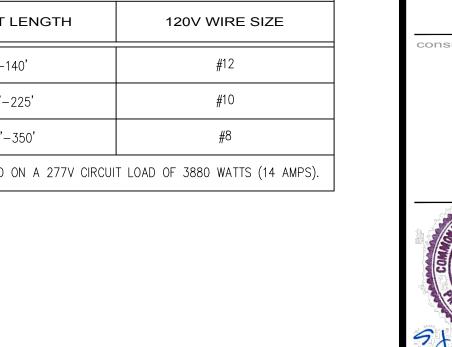
12. AREAS WHERE EXPOSED WIRING IS ACCEPTABLE INCLUDES IDF ROOM AND EXISTING ELECTRICAL ROOM. EXPOSED WIRING TO BE RUN IN CONDUIT(EMT) WITH COMPRESSION TYPE

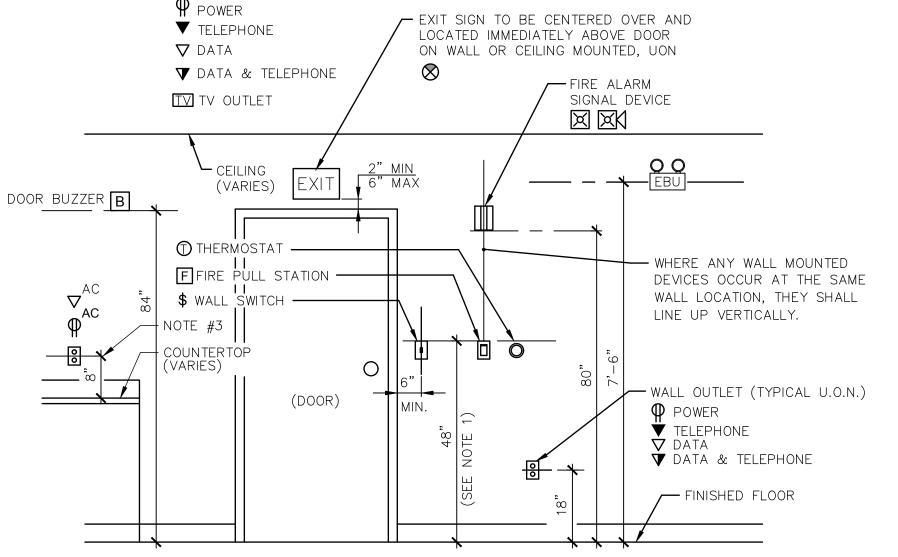
13. FEEDERS FOR PANELS AND HVAC EQUIPMENT SHALL BE RUN IN EMT.

14. BRANCH CIRCUITS FOR LIGHTING AND OUTLETS SHALL BE RUN IN CONDUIT CONCEALED IN CEILING AND WALLS. FLEXIBLE CONDUIT WHIPS MAY BE USED WITHIN SIX FEET OF LIGHTING OR RECEPTACLES.

120V BRANCH CIRCUIT VOLTAGE DROP TABLE 120V WIRE SIZE CIRCUIT LENGTH #12 0'-60' #10 61'-100' 101'–160' TABLE IS BASED ON A 120V CIRCUIT LOAD OF 1680 WATTS (14 AMPS).

277V BRANCH CIRCUIT	VOLTAGE DROP TABLE					
CIRCUIT LENGTH	120V WIRE SIZE					
0'-140'	#12					
141'–225'	#10 #8					
226'-350'						
TABLE IS BASED ON A 277V CIRCUI	T LOAD OF 3880 WATTS (14 AMPS).					





DRAWING NOTES:

1. HEIGHT GIVEN FOR THIS DEVICE IS THE MAXIMUM HEIGHT TO THE HIGHEST OPERABLE PART OF THE DEVICE

2. REFER TO DRAWINGS FOR SPECIFIC DEVICE HEIGHTS.

3. VERIFY LOCATION ABOVE COUNTERS (AC) WITH ARCH. ELEVATIONS.

typical device locations not to scale

ABBREVIATIONS

AHU AIR HANDLING UNIT

AC ABOVE COUNTER HEIGHT (INDICATED ADJACENT TO DEVICE)

AV AUDIO / VISUAL BC BELOW COUNTER

AFF ABOVE FINISHED FLOOR

CLG CEILING DWG DRAWING

EC ELECTRICAL CONTRACTOR

FAC FIRE ALARM CONTRACTOR

FLR FLOOR GFI GROUND FAULT INTERRUPTING

HP HORSEPOWER

KEC KITCHEN EQUIPMENT CONTRACTOR

MC MECHANICAL CONTRACTOR MH MOUNTING HEIGHT

NL NIGHT LIGHT

NTS NOT TO SCALE

PC PLUMBING CONTRACTOR

RTU ROOF TOP UNIT

TYP TYPICAL

U.G. UNDERGROUND UON UNLESS OTHERWISE NOTED

WP WEATHER PROOF

I "BIDDING & PERMITTING"



Food Service EHS1801-TR1

electrical legend, notes, & abbreviations

12.06.17 dcm-4163

as noted

drawing number:

E-001

<u>GENERAL</u>

1. <u>GENERAL CONDITIONS:</u>

1.1. THE GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS AND SPECIAL CONDITIONS ARE A PART OF THIS CONTRACT AND APPLY TO THIS SECTION AS FULLY AS IF REPEATED HEREIN.

2. SCOPE

- 2.1. THIS SECTION OF SPECIFICATIONS INCLUDES BUT IS NOT LIMITED TO:
- 2.2. ALL LABOR, TOOLS, APPLICATIONS, MATERIALS AND EQUIPMENT REQUIRED TO FURNISH AND INSTALL THE COMPLETE INSTALLATION SHOWN ON THE DRAWINGS FOR THIS SECTION OF THE WORK AND/OR IN THE FOLLOWING SPECIFICATIONS, INCLUDING THAT WHICH IS REASONABLY INFERRED.

3. <u>CODES AND REGULATIONS:</u>

LOCAL ORDINANCES AND REGULATIONS

- 3.1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF PUBLIC AUTHORITIES HAVING JURISDICTION AND UTILITIES FURNISHING SERVICES.
- 3.2. CODES GOVERNING THIS WORK INCLUDE BUT ARE NOT LIMITED TO THE LATEST APPROVED EDITION OF THE FOLLOWING:
 9TH EDITION OF THE MASSACHUSETTS BUILDING CODE
 2015 INTERNATIONAL ENERGY CONSERVATION CODE
 2015 INTERNATIONAL FIRE CODE WITH AMENDMENTS
 2010 NFPA 72 NATIONAL FIRE ALARM CODE WITH MASSACHUSETTS AMENDMENTS
 2017 NFPA 70 NATIONAL ELECTRIC CODE WITH MASSACHUSETTS AMENDMENTS

4. <u>STANDARDS:</u>

4.1. ELECTRICAL MATERIAL AND EQUIPMENT SHALL HAVE BEEN TESTED AND LISTED OR LABELED AS CONFORMING TO APPROVED PUBLISHED STANDARDS BY UNDERWRITERS LABORATORIES WHERE SUCH LISTING OR LABELING SERVICE IS AVAILABLE FOR THE CLASS OF MATERIALS OR EQUIPMENT. WHERE APPLICABLE, LISTING OR LABELING SHALL APPLY TO THE COMPLETE ASSEMBLED EQUIPMENT AND NOT TO THE COMPONENTS ALONE.

5. <u>SUBMITTALS:</u>

- 5.1. ELECTRONIC (PDF) OF MATERIALS LIST, SHOP DRAWINGS AND DATA SHEETS SHALL BE SUBMITTED TO ARCHITECT, CONSTRUCTION MANAGER, AND ENGINEER FOR REVIEW. SUBMITTALS SHALL BE MADE AND FAVORABLE REVIEW SECURED BEFORE MATERIAL AND EQUIPMENT IS INSTALLED.
- 5.2. MATERIALS LIST SHALL INCLUDE LIGHT FIXTURES, PANELS, DEVICES, WIREWAYS, DISCONNECTS, LAMPS AND ALL OTHER SPECIFIED OR UNSPECIFIED STANDARD CATALOGED MATERIALS TO BE USED. THE LIST SHALL INCLUDE MANUFACTURER, TYPE AND SUCH OTHER DESCRIPTIVE DATA AS MAY BE REQUIRED TO DETERMINE THE ACCEPTABILITY OF EACH ITEM.
- 5.3. SHOP DRAWINGS AND DATA SHEETS FOR EQUIPMENT AND SYSTEMS SHALL BE SUBMITTED WHERE REQUIRED IN THE SPECIFICATION FOR THOSE ITEMS. INCLUDE INFORMATION ON EACH COMPONENT, WIRING DIAGRAMS, LAYOUTS, DIMENSIONS AND SUFFICIENT OTHER DATA TO ESTABLISH COMPLIANCE WITH THE SPECIFICATIONS AND ACCEPTABILITY OF THE EQUIPMENT OR SYSTEM.

<u>PRODUCTS</u>

6. RECEPTACLE OUTLETS:

- 6.1. ACCEPTABLE MANUFACTURERS: COOPER WIRING, HUBBELL INCORPORATED, LEVITON MANUFACTURING.
- 6.2. RECEPTACLE OUTLETS SHALL COMPLY WITH NEMA WD 1, NEMA WD 6, CONFIGURATION 5-20R, UL 498, AND FEDERAL SPECIFICATIONS W-C-596, GROUNDING TYPE..
- 6.3. GENERAL CONVENIENCE OUTLETS SHALL BE 20 AMP, 125 VOLT, NEMA 5-20R, UNLESS OTHERWISE NOTED. PROVIDE COOPER CR5362 OR APPROVED EQUAL.
- 6.4. GROUND FAULT CIRCUIT INTERRUPTER (GFCI) RECEPTACLE SHALL BE STRAIGHT BLADE, NON-FEED-THROUGH TYPE. INCLUDE INDICATOR LIGHT THAT SHOWS WHEN THE GFCI HAS MALFUNCTIONED AND NO LONGER PROVIDES PROPER GFCI PROTECTION. PROVIDE COOPER VGF20 OR APPROVED EQUAL.
- 6.5. COLORS SHALL BE THE FOLLOWING: COLOR BY ARCHITECT
- 6.6. SPECIAL OUTLETS, NOT LISTED ABOVE, SHALL BE STANDARD NEMA CONFIGURATION FOR THE APPLICATION SHOWN AND SHALL BE OF EQUIVALENT GRADE AND QUALITY TO THOSE LISTED ABOVE. AN APPROVED CORD CAP OR PLUG SHALL BE FURNISHED WITH EACH RECEPTACLE OUTLET EXCEPT GENERAL CONVENIENCE TYPE. PLUG SHALL BE OF THE SAME GRADE, QUALITY AND MANUFACTURER AS THE OUTLET.

7. <u>DEVICE & BOX COVER PLATES:</u>

- 7.1. ACCEPTABLE MANUFACTURERS: COOPER WIRING, HUBBELL INCORPORATED, LEVITON MANUFACTURING.
- 7.2. PROVIDE A PLATE FOR EACH OUTLET, RECEPTACLE, SWITCH, DEVICE AND BOX.
- 7.3. COLORS SHALL BE SELECTED BY THE UNIVERSITY AND ARCHITECT.
- 7.4. ALL PLATE FOR EXTERIOR USE SHALL BE LISTED AND LABELED "SUITABLE FOR WET LOCATION WHILE IN USE".
- 7.5. GANGED DEVICES SHALL HAVE GANG PLATES EXACTLY MATCHING THE ARRANGEMENT AND QUANTITY OF
- 7.6. SPECIAL PLATES, ENGRAVING, OR APPLICATION SHALL BE AS INDICATED ON THE DRAWINGS OR OTHERWISE SPECIFIED.

8. <u>OUTLET AND JUNCTION BOXES:</u>

- 8.1. ACCEPTABLE MANUFACTURERS: COOPER CROUSE—HINDS, EGS / APPLETON, HUBBELL INCORPORATED.
- 8.2. THE SIZE OF EACH OUTLET OR JUNCTION BOX SHALL BE DETERMINED BY THE NUMBER AND SIZES OR WIRES AND CONDUITS ENTERING THE BOX, PER NEC, BUT SHALL BE NOT LESS THAN 4—INCH SQUARE AND 1—1/2 INCHES DEEP UNLESS OTHERWISE NOTED.
- 8.3. OUTLET AND JUNCTION BOXES FOR INTERIOR USE SHALL BE GALVANIZED, ONE—PIECE PRESSED OR WELDED STEEL, KNOCKOUT TYPE, EXCEPT WHERE OTHER TYPES OF BOXES ARE INDICATED OR SPECIFIED. IN MASONRY OR CONCRETE CONSTRUCTION WATERPROOF BOXES MANUFACTURED FOR THAT PURPOSE SHALL BE USED. PLASTIC, FIBER OR COMPOSITION BOXES WILL NOT PERMITTED.
- 8.4. OUTLET AND JUNCTION BOXES FOR SURFACE EXTERIOR USE SHALL BE CAST BOXES, CROUSE—HINDS FS TYPE, OR APPROVED EQUIVALENT.

9. <u>CONDUITS AND FITTINGS</u>

- 9.1. ACCEPTABLE MANUFACTURERS: AFC CABLE SYSTEMS, ALLIED TUBE AND CONDUIT, SOUTHWIRE COMPANY.
 9.2. STANDARD WEIGHT RIGID METAL CONDUIT SHALL BE HOT DIPPED GALVANIZED. ALL FITTINGS SHALL BE OF THE SCREW THREAD TYPE. COUPLINGS, LOCKNUTS, BUSHINGS, ETC., SHALL BE HOT DIPPED GALVANIZED.
- 9.3. ELECTRICAL METALLIC TUBING (EMT) SHALL BE GALVANIZED. COUPLINGS AND CONNECTORS SHALL BE GALVANIZED. FITTINGS SHALL BE COMPRESSION TYPE WITH GLAND SEALING RINGS OR SET SCREW TYPE.
- 9.4. FLEXIBLE CONDUIT SHALL BE GALVANIZED STEEL OR ALUMINUM. WHERE USED N DAMP OR WET LOCATIONS FLEXIBLE CONDUIT SHALL BE OF THE LIQUID—TIGHT TYPE WITH OUTER NEOPRENE JACKET AND SUITABLE LIQUID—TIGHT FITTINGS.
- 9.5. ALL CONDUITS SHALL BE CONCEALED IN FINISHED WALLS, CEILINGS, AND FLOORS UNLESS AGREED UPON IN WRITING BY THE ARCHITECT AND ENGINEER OR OTHERWISE NOTED.

10. <u>WIRE AND CABLE:</u>

- 10.1. ACCEPTABLE MANUFACTURERS: SOUTHWIRE INCORPORATED, BELDEN INC, GENERAL CABLE CORPORATION.
- 10.2. WIRE AND CABLE FOR USE ON SYSTEMS OF 50 VOLTS TO 600 VOLTS SHALL BE 600 VOLT RATED TYPE THHN / THWN FOR BRANCH CIRCUITS. FEEDERS SHALL BE THHN / THWN.
- 10.3. WIRE AND CABLE FOR USE ON SYSTEMS OF BELOW 50 VOLTS SHALL BE 300 VOLT PVC INSULATED AND SUITABLE FOR THE CLASS OR WIRING EXCEPT AS OTHERWISE INDICATED OR SPECIFIED.
- 10.4. MULTI-CONDUCTOR CABLE: THHN / THWN COPPER CONDUCTORS, INCLUDING GREEN INSULATED GROUNDING CONDUCTOR, CABLED TOGETHER WITH A BINDER TAPE AND A STEEL INTERLOCKED ARMOR OVER THE ENTIRE ASSEMBLY. COMPLY WITH NEMA WC 70 / ICEA S-95-658 FOR METAL CLAD TYPE MC CABLE, UL 1063, UL 83 AND UL 1569
- 10.5. ALL CONDUCTORS SHALL BE COPPER, SOLID FOR NO. 10 AWG AND SMALLER; STRANDED FOR NO. 8 AWG AND LARGER.
- 10.6. ALL CABLES SHALL BE CONTINUOUSLY COLOR CODED OVER THEIR ENTIRE LENGTH. PHASE TAPE COLOR CODE IS NOT ACCEPTABLE. COLORING SHALL BE AS FOLLOWS:

208/120V 480/277V

PHASE A - BLACK PHASE A - BROWN

PHASE B - RED PHASE B - ORANGE

PHASE C - BLUE PHASE C - YELLOW

NEUTRAL - WHITE NEUTRAL - WHITE/TRACER OR GREY

- 10.7. FOR CONDUCTORS #10 AWG AND SMALLER: WIRE AND CABLE CONNECTORS SHALL BE SOLDERLESS, MECHANICAL, SOLID COPPER OR COPPER ALLOY TYPES. CONNECTORS SHALL BE BUCHANAN ELECTRICAL PRODUCTS COPPER SQUEEZE—ON TYPE WITH MOLDED RUBBER OR VINYL CAP, "SCOTCHLOCK" OR IDEAL INDUSTRIES "SUPER—NUT" SPRING CONNECTORS WITH MOLDED VINYL CAP OR AS APPROVED.
- 10.8. FOR CONDUCTORS #8 AWG AND LARGER: UL STANDARD 486A DUAL CRIMP LONG-BARREL COMPRESSION LUGS WITH TWO-BOLT HOLES, SUITABLE FOR 90°C, UNLESS UNAVAILABLE IN THE EQUIPMENT. SIMILAR TO "HYLUGS" MANUFACTURED BY BURNDY TO ACCOMMODATE ½" BOLTS. COMPRESSION CRIMP SHALL BE PERFORMED UTILIZING DIES THAT IMPRESS A MARK INDICATING THE DIE USED TO CRIMP THE CONNECTION. DIE MARK SHALL BE VISIBLE. HIGH PRESS LUGS SHALL BE USED WHEREVER FEASIBLE. WHERE EQUIPMENT TERMINATIONS DO NOT ACCOMMODATE COMPRESSION LUGS, CONNECTORS SHALL BE MOUNTING BLOCK TYPE, INSULATED WITH CLAMP-ON MOLDED COVERS THAT ACCOMMODATE THE LUG TYPES SPECIFIED HEREIN. THE MANUFACTURER SHALL BE O-Z / GEDNEY OR BURNDY COMPANY.

11. LIGHTING FIXTURES AND LAMPS:

- 11.1. FIXTURES SHALL BE COMPLETE WITH ALL REQUIRED ACCESSORIES AND EQUIPMENT, INCLUDING LAMPS, NECESSARY FOR A COMPLETE INSTALLATION. CONTRACTOR SHALL RECEIVE, UNPACK, ASSEMBLE AND INSTALL FIXTURES INDICATED AS BEING FURNISHED BY OTHERS.
- 11.2. REFER TO THE LIGHTING FIXTURE SCHEDULE FOR INFORMATION ON LIGHT FIXTURES.
- 11.3. VERIFY THE CEILING OR WALL CONSTRUCTION, VOLTAGE AND THE MOUNTING REQUIREMENTS OF EACH FIXTURE AND PROVIDE PLASTER FRAMES, SPECIAL FLANGES, CONCRETE POUR HOUSINGS, BOXES, BRACKETS, ADAPTERS, HANGERS, STEMS, CANOPIES, SPECIAL BALLASTS OR LENSES AND OTHER MATERIALS NECESSARY TO PROPERLY PURCHASE AND MOUNT THE FIXTURE.

12. NAMEPLATE AND LABELS:

- 12.1. NAMEPLATES SHALL BE PROVIDED FOR PANELBOARDS, SWITCHES, AND TO IDENTIFY SIMILAR ITEMS WHICH ARE FURNISHED OR INSTALLED UNDER THIS SECTION.
- 12.2. NAMEPLATES SHALL BE ENGRAVED LAMINATED PLASTIC WITH CHARACTERS CUT THROUGH THE BLACK TOP LAYER TO WHITE LAYER BELOW.

EXECUTION

1. INSTALLATION AND CONNECTION OF ELECTRICAL EQUIPMENT:

1.1. EQUIPMENT FURNISHED BY OTHERS SHALL BE COMPLETELY CONNECTED TO THE ELECTRICAL SYSTEM EXCEPT AS NOTED ON THE DRAWINGS. ALL FUSES, BREAKERS AND DISCONNECTS SHALL BE PROVIDED AS NECESSARY FOR PROPER PROTECTION. PROVIDE ALL FLEXIBLE CONDUIT, BOXES, FITTINGS, RECEPTACLES, CORDS, PLUGS AND OTHER MATERIAL REQUIRED FOR INSTALLATION. REFER TO MANUFACTURER'S DIRECTIONS WHERE APPLICABLE.

2. <u>INSTALLATION OF CONDUIT:</u>

- 2.1. STANDARD WEIGHT RIGID METAL CONDUIT SHALL BE USED WHERE EXPOSED TO THE WEATHER, PLACED UNDERGROUND BELOW CONCRETE SLAB, IN CONCRETE OR MASONRY CONSTRUCTION IN CONTACT WITH EARTH, AND WHERE SHOWN ON THE PLANS.
- 2.2. GALVANIZED STEEL ELECTRICAL METALLIC TUBING SHALL BE USED IN ABOVE GROUND, INTERIOR, DRY LOCATIONS PROTECTED FROM WEATHER AND PHYSICAL DAMAGE, AND MAY BE USED IN CONCRETE OR MASONRY CONSTRUCTION NOT IN CONTACT WITH EARTH.
- 2.3. FLEXIBLE METALLIC CONDUIT SHALL BE USED WHERE SHOWN ON THE PLANS AND TO CONNECT CONDUIT SYSTEMS TO MOTORS, DIRECT WIRED AND VIBRATING EQUIPMENT AND AS A FINAL CONNECTION TO LIGHTING FIXTURES (6' MAX) IN ACCESSIBLE CEILINGS. IT MAY BE USED AS A WIRING SYSTEM INSTEAD OF EMT IN INTERIOR WALLS ONLY (DRY FRAME OR STUD CONSTRUCTION), WHEN ALLOWED BY LANDLORD AND/OR OWNER.
- 2.4. LIQUIDTIGHT FLEXIBLE METAL CONDUIT SHALL BE USED FOR FINAL ELECTRICAL CONNECTION TO ROOF TOP OF OTHER EQUIPMENT EXPOSED TO THE ENVIRONMENT.
- 2.5. RIGID NON-METALLIC CONDUIT MAY BE USED FOR ALL UNDERSLAB OR UNDERGROUND WORK IN PLACE OF STANDARD WEIGHT RIGID METAL AND WHERE SPECIFICALLY SPECIFIED. ALL UFNS OF RIGID NON-METALLIC CONDUIT SHALL CONTAIN A SEPARATE GREEN GROUND WIRE ADEQUATELY SIZED FOR SERVICE INTENDED. WHERE REQUIRED TO CONTINUE ABOVE SLAB, STUB NON-METALLIC CONDUIT 6" ABOVE SLAB THEN MAKE PROPER TRANSITION TO METAL CONDUIT.
- 2.6. ALL RIGID STEEL CONDUIT INSTALLED IN THE GROUND SHALL BE WRAPPED WITH HUNT'S PROCESS NO. 3., PVC COATED OR ENCASED IN 3" CONCRETE ON ALL SIDES.
- 2.7. THE MINIMUM SIZES OF CONDUIT SHALL BE CODE SIZE FOR THE NUMBER AND SIZE OF CONDUCTORS, UNLESS A LARGER SIZE IS SHOWN, IN WHICH CASE SUCH LARGER SIZE SHALL BE USED.
- 2.8. ALL FINAL CONNECTION TO MOTORS SHALL BE FLEXIBLE METAL CONDUIT AND AS SHOWN ON DRAWINGS.
- 2.9. WHERE PORTIONS OF RACEWAYS OR SLEEVES ENTER AREAS SUCH AS COLD STORAGE OR WHERE PASSING FROM THE INTERIOR TO THE EXTERIOR OF A BUILDING, THE RACEWAY OR SLEEVE SHALL BE FILLING WITH AN APPROVED MATERIAL TO PREVENT THE CIRCULATION OF WARM AIR TO A COOLER SECTION OF THE RACEWAY SLEEVE.

3. INSTALLATION AND CONNECTION OF WIRING:

- 3.1. CLEAN OUT AND DRY ALL CONDUIT AND WIREWAYS BEFORE PULLING ANY WIRES. USE NO LUBRICANT EXCEPT AS RECOMMENDED BY THE WIRE OR CABLE MANUFACTURER.
- 3.2. MAKE ALL CONNECTION AND SPLICES NECESSARY TO PROPERLY COMPLETE THE ELECTRICAL WIRING. CONNECTION AND SPLICES SHALL BE MADE ONLY IN PULL, JUNCTION OR OUTLET BOXES, OR IN SWITCHBOARDS, WIREWAYS OR PANELS HAVING SUFFICIENT CODE SIZED GUTTER SPACE. CONNECTION AND SPLICES IN WIRES SMALLER THAN NO. 6 AWG SHALL BE MADE WITH COMPRESSION, VISE TYPE, OR SPLIT BOLT SOLDERLESS CONNECTORS, INSULATED AND TAPED.

4. <u>TELEPHONE SYSTEMS:</u>

- 4.1. FURNISH AND INSTALL DEVICES AND CONDUIT FOR TELEPHONE DEVICES AS INDICATED ON DRAWINGS. CONNECT DEVICES TO EXISTING TELEPHONE SYSTEM, VERIFY EXACT LOCATION.
- 4.2. INSTALL A 1/8-INCH POLYETHYLENE PULL-IN WIRE IN EACH CONDUIT RUN.

4.3. TELEPHONE WALL OUTLETS SHALL BE 4-11/16 INCH SQUARE BY 2-1/8 INCH DEEP METAL BOXES, WITH PLASTER RING AND SINGLE BUSHED OUTLET FLUSH TELEPHONE PLATE.

5. <u>GROUNDING:</u>

- 5.1. MAKE GOOD MECHANICAL AND ELECTRICAL CONTACT AT ALL POLES, PANELBOARDS, OUTLET BOXES, JUNCTION BOXES, AND WHEREVER THE CONDUIT RUN IS CONNECTED. PERMANENTLY AND EFFECTIVELY GROUND ALL CONDUIT, FIXTURES, MOTORS AND OTHER EQUIPMENT AS REQUIRED BY ALL APPLICABLE CODES, REGULATIONS AND STANDARDS, NEC 250.
- 6. CHECKING AND TESTING OF EQUIPMENT AND SYSTEMS:
- 6.1. PANELS, DISCONNECTS, STARTERS AND OTHER EQUIPMENT INSTALLED UNDER THIS SECTION SHALL BE INSPECTED FOR DEFECTS AND TESTED FOR PROPER OPERATION.
- 6.2. SYSTEMS SHALL BE TESTED FOR SHORT CIRCUITS, OPEN CIRCUITS AND WRONG CONNECTIONS AND SHALL BE FREE FROM MECHANICAL AND ELECTRICAL DEFECTS. CIRCUITS SHALL BE TESTED FOR PROPER NEUTRAL AND GROUND CONNECTIONS.



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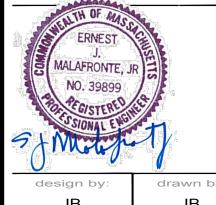
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management

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approved by:

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EHS1801-TR1

60 hodges avenue taunton, ma 02780

keyplan:

rev.: date: issued for: initial

electrical specifications

date:
12.06.17

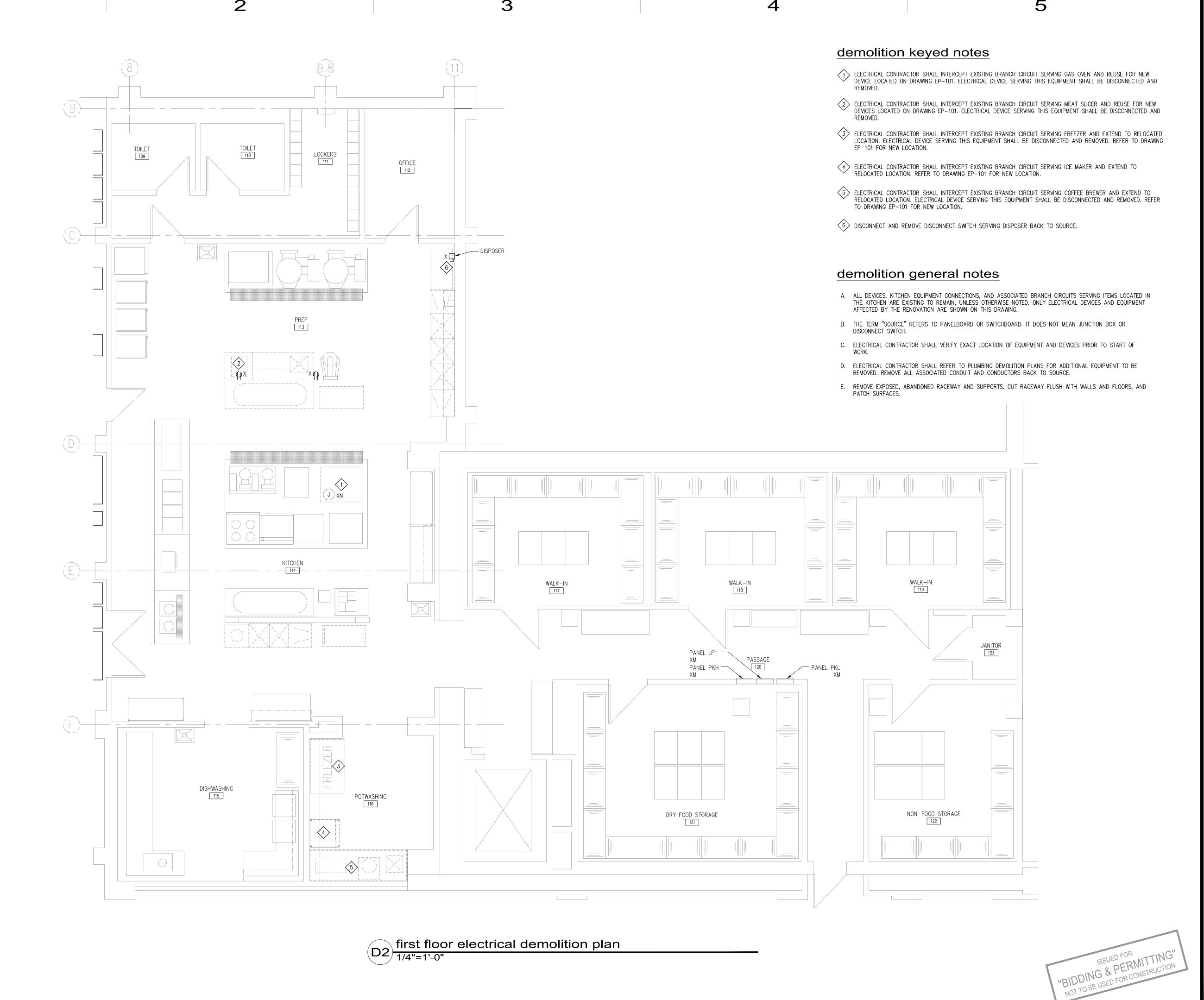
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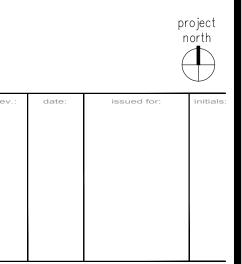
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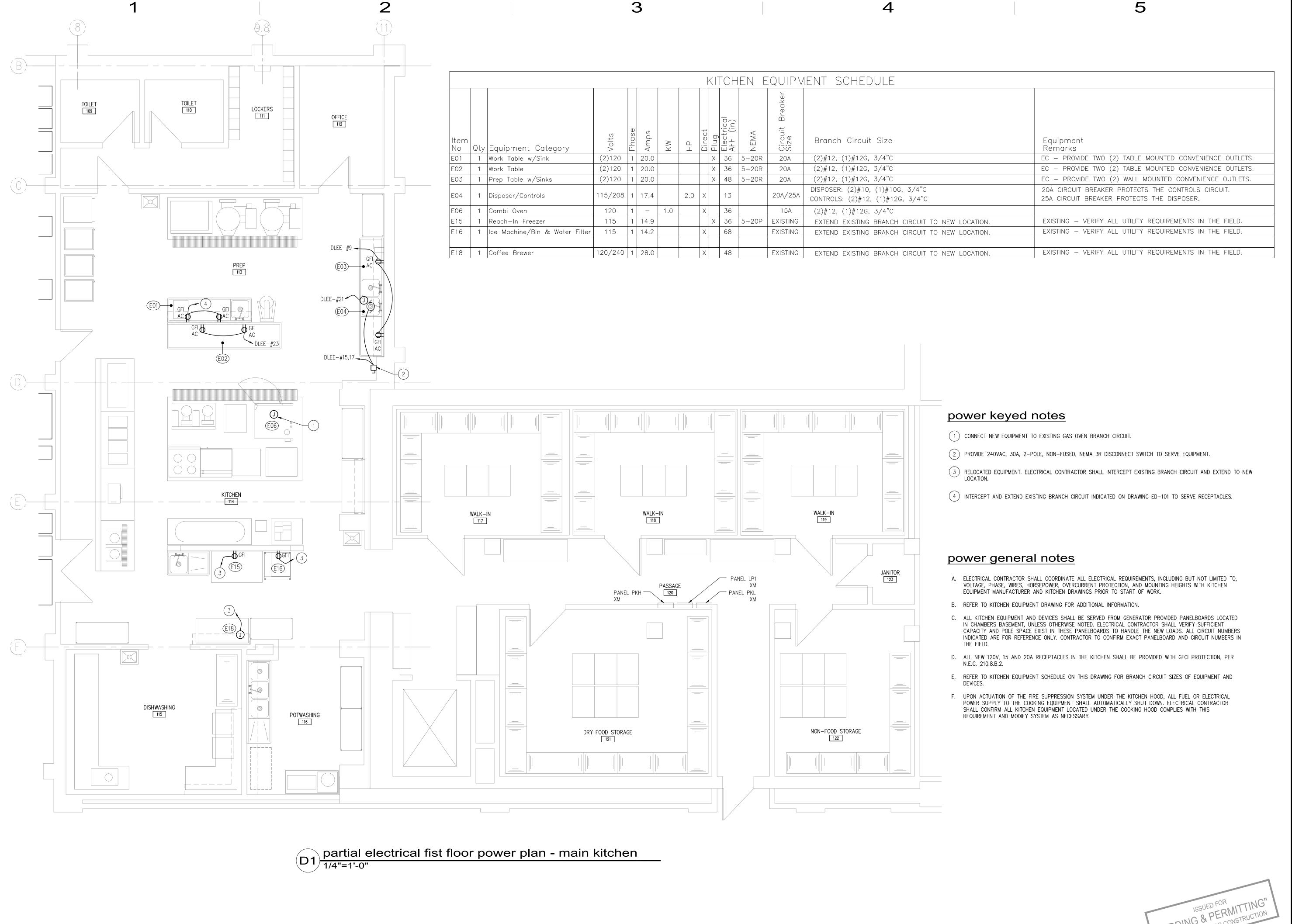
electrical demolition plan

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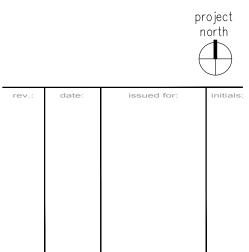


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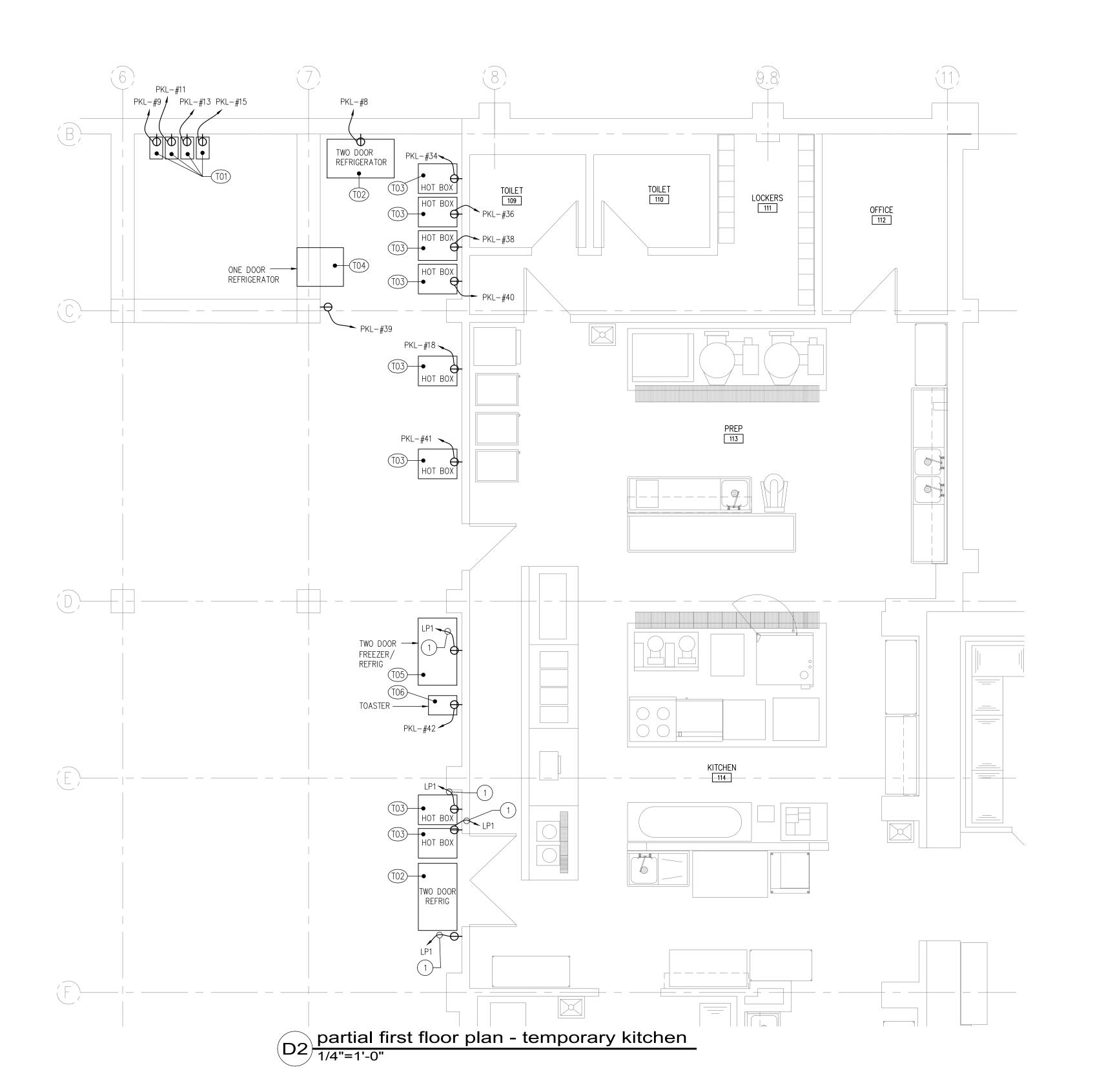
partial electrical fist floor power plan main kitchen

12.06.17 project numbe dcm-4163

as noted

E-101

	KITCHEN EQUIPMENT SCHEDULE												
ltem No	Qty Equipment Category	Volts	Phase Amps	KW HP Direct Plug Electrical AFF (in)	NEMA	Circuit Breaker Size	Branch Circuit Size	Equipment Remarks					
T01	4 Coffee Maker	120	1	1.5 X -	5-20R	20A	(2)#12, (1)#12G, 3/4"C	EC - COORDINATE MOUNTING HEIGHT WITH OWNER PRIOR TO START OF WORK.					
T02	2 Two Door Refrigerator	120	1 12	X -	5-20R	15A	(2)#12, (1)#12G, 3/4"C	EC - COORDINATE MOUNTING HEIGHT WITH OWNER PRIOR TO START OF WORK.					
T03	8 Hot Box	120	1	1.5 X -	5-20R	20A	(2)#12, (1)#12G, 3/4"C	EC - COORDINATE MOUNTING HEIGHT WITH OWNER PRIOR TO START OF WORK.					
T04	1 One Door Refrigerator	120	1 11.3	X -		20A	(2)#12, (1)#12G, 3/4°C	EC - COORDINATE MOUNTING HEIGHT WITH OWNER PRIOR TO START OF WORK.					
T05	1 Two Door Refrig. / Freezer	120	1 13.0	X -		20A	(2)#12, (1)#12G, 3/4"C	EC - COORDINATE MOUNTING HEIGHT WITH OWNER PRIOR TO START OF WORK.					
T06	1 Toaster	120	1 13.5	X -		20A	(2)#12, (1)#12G, 3/4"C	EC - COORDINATE MOUNTING HEIGHT WITH OWNER PRIOR TO START OF WORK.					



D

power keyed notes

1) PROVIDE 120V, 20A, 1-PHASE BRANCH CIRCUIT TO SERVE TEMPORARY KITCHEN EQUIPMENT. KITCHEN EQUIPMENT SHALL BE SERVED FROM EXISTING PANELBOARD "LP1".

power general notes

- A. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS, INCLUDING BUT NOT LIMITED TO, VOLTAGE, PHASE, WIRES, HORSEPOWER, OVERCURRENT PROTECTION, AND MOUNTING HEIGHTS WITH NAMEPLATE INFORMATION FOUND KITCHEN EQUIPMENT PRIOR TO START OF WORK.
- B. REFER TO KITCHEN EQUIPMENT SCHEDULE ON THIS DRAWING FOR BRANCH CIRCUIT SIZES OF EQUIPMENT AND DEVICES.
- C. PANELBOARDS "PKL" AND "LP1" ARE LOCATED IN PASSAGE 120.
- D. ELECTRICAL CONTRACTOR SHALL VERIFY SUFFICIENT POLE SPACE EXISTS IN PANELS "PKL" AND "LP1" TO SERVE TEMPORARY KITCHEN EQUIPMENT. NOTIFY ENGINEER IMMEDIATELY IF THIS IS NOT THE CASE.
- E. ELECTRICAL CONTRACTOR SHALL ROUTE BRANCH CIRCUIT FROM THE PANELBOARD INDICATED AND ABOVE THE CEILING TO TEMPORARY KITCHEN EQUIPMENT LOCATION. TERMINATE BRANCH CIRCUIT AT JUNCTION BOX LOCATED AT THE CEILING AND TRANSITION TO TYPE SO FLEXIBLE CORD. PROVIDE MINIMUM 8' OF TYPE SO FLEXIBLE CORD WITH ASSOCIATED CONNECTOR BODY FOR TO SERVE KITCHEN EQUIPMENT. ELECTRICAL CONTRACTOR SHALL COORDINATE ROUTING OF BRANCH CIRCUIT, ACTUAL LENGTH OF TYPE SO CABLE, AND EXACT LOCATION OF JUNCTION BOXES WITH CLIENT PRIOR TO START OF WORK.



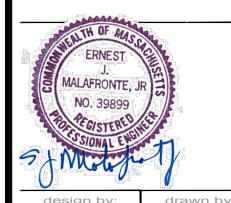
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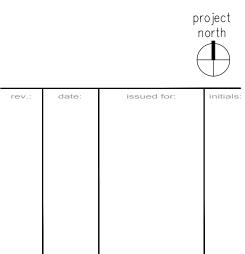


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keyplan:



partial electrical first floor power plan - temporary kitchen

12.06.17

as noted

E-102

dcm-4163

ISSUED FOR
ISSUED FOR CONSTRUCTION

PANEL "DLEE"							CT NUM	1BER					DCM-4163
SERVICE RATED		X YES	-	NO		DATE							
ISOLATED GROUND BUS	DAGEMENT	YES	Х	NO		TYPE	ID OLIOF	OT OIDO	UT DAT	TNIO			EVIOTIA
LOCATION	BASEMENT					AIC AN	ID SHOP	RT CIRCU	JII RAT	ING			EXISTIN
	CIRCUIT					I					CIRCUIT		
	BRKR.	LTG. REC		HTG.		MISC.			REC.		BRKR.		
DESCRIPTION	SIZE	kVA kVA	kVA	kVA	kVA	kVA	kVA	kVA	kVA	kVA	SIZE	DESCRIPTION	
HOT FOOD SERVICE CAB (EXISTING)	20A/2P										40A/2P	COFE URN (EXISTING)	
KETTLE (EXISTING)	20A										20A	KETTLE (EXISTING)	
OVEN STEAMER (EXISTING)	20A										20A	HOOD LIGHTS KITCHEN (EXISTING)	
E03 - PREP TABLE WITH SINKS (NEW)	20A	0.4									20A	TILTING SKILLET (EXISTING)	
OVEN STEAMER (EXISTING)	20A										20A	DOUBLE KETTLE ASSEMBLY (EXISTING)	
DOUBLE CONVECTION OVEN (EXISTING)	20A										20A	CONVECTION OVEN (EXISTING)	
E04 - GARBAGE DISPOSAL (NEW)	25A/2P (NEW)		1.8								20A	HOOD LIGHTS KITCHEN (EXISTING)	
EU4 - GARBAGE DISPOSAL (NEW)	ZSA/ZF (NEVV)		1.8								20A	ELEC DOOR MAGNET (EXISTING)	
ELECTRIC DOORS BASEMENT (EXISTING)	20A										20A	SPRINKLER ALARM MECH RM (EXISTING)	
E04 - GARBAGE DISPOSAL CONTROLS (NEW)	20A				1.0						20A	SPACE	
E02 - PREP TABLE WITH SINKS (NEW)	20A	0.4									20A	BASEMENT FREEZER LIGHTS (EXISTING)	
CIRC PUMP MECH RM (EXISTING)	20A												
CIRC PUMP MECH RM (EXISTING)	20A										20A/3P	/AC PUMP ROOM G6 (EXISTING)	
TEMP CONTROL PANEL (EXISTING)	20A												
											20A	CIRC PUMP PLUMBING (EXISTING)	
PANEL "DLER" (EXISING)	100A/3P										20A	CIRC PUMP PLUMBING (EXISTING)	
											20A	HOT WATER CIRC PUMP (EXISTING)	
BASEMENT DRAIN HEATER (EXISTING)	20A												
AIR DRYER (EXISTING)	20A										100A/3P	ELEVATOR (EXISTING)	
SPARE	20A												
LEFT SIDE SUB TOTAL		0.0 0.	8 3.6	0.0	0 1.0		_	_	_				
RIGHT SIDE SUB TOTAL						0.0	0.0	0.0	0.0	0.0		NOTES:	
CONNECTED SUB TOTAL		0 0.	8 3.6	(0 1							CIRCUIT BREAKER TYPE:	
FUTURE ALLOWANCE		0	0 0	(0 0							S=SHUNT TRIP	
SUB-TOTAL		0 0.	8 3.6	(0 1							G=GFIC	
DEMAND FACTOR		1 NEC	1	•	1 0.8	_						L=LOCK ON HANDLE	
SUB-TOTAL DANIEL IVA		0 0.	8 3.6	(0.8							H=HACR TYPE	
TOTAL PANEL kVA TOTAL PANEL AMPS		5.2 14.4										A=AFCI	

(X) 100% () 150% () 200% PHASE MOUNTING

120 / 208

3 RECESSED

В

D

MAIN BREAKER MCB
NEUTRAL
BUS RATING 250A

PANEL "DLEE"						PROJE	CT NUM	1BER					DCM-4163
SERVICE RATED		X YE		NO		DATE							
ISOLATED GROUND BUS		YE	S >	(NO		TYPE							
LOCATION	BASEMENT					AIC AN	ID SHOP	RT CIRCL	JIT RATI	NG			EXISTIN
	CIRCUIT			1	1						CIRCUIT		
	BRKR.		EC. MOT.	HTG.		MISC.		MOT.	REC.	LTG.	BRKR.		
DESCRIPTION	SIZE	kVA k\	/A kVA	kVA	kVA	kVA	kVA	kVA	kVA	kVA	SIZE	DESCRIPTION	
HOT FOOD SERVICE CAB (EXISTING)	20A/2P										40A/2P	COFE URN (EXISTING)	
KETTLE (EXISTING)	20A										20A	KETTLE (EXISTING)	
OVEN STEAMER (EXISTING)	20A										20A	HOOD LIGHTS KITCHEN (EXISTING)	
E03 - PREP TABLE WITH SINKS (NEW)	20A	0	.4								20A	TILTING SKILLET (EXISTING)	
OVEN STEAMER (EXISTING)	20A										20A	DOUBLE KETTLE ASSEMBLY (EXISTING)	
DOUBLE CONVECTION OVEN (EXISTING)	20A										20A	CONVECTION OVEN (EXISTING)	
	054 (00 (NEW)		1.8								20A	HOOD LIGHTS KITCHEN (EXISTING)	
E04 - GARBAGE DISPOSAL (NEW)	25A/2P (NEW)		1.8								20A	ELEC DOOR MAGNET (EXISTING)	
ELECTRIC DOORS BASEMENT (EXISTING)	20A										20A	SPRINKLER ALARM MECH RM (EXISTING)	
E04 - GARBAGE DISPOSAL CONTROLS (NEW)	20A				1.0						20A	SPACE	
E02 - PREP TABLE WITH SINKS (NEW)	20A	0	.4								20A	BASEMENT FREEZER LIGHTS (EXISTING)	
CIRC PUMP MECH RM (EXISTING)	20A												
CIRC PUMP MECH RM (EXISTING)	20A										20A/3P	VAC PUMP ROOM G6 (EXISTING)	
TEMP CONTROL PANEL (EXISTING)	20A												
											20A	CIRC PUMP PLUMBING (EXISTING)	
PANEL "DLER" (EXISING)	100A/3P										20A	CIRC PUMP PLUMBING (EXISTING)	
											20A	HOT WATER CIRC PUMP (EXISTING)	
BASEMENT DRAIN HEATER (EXISTING)	20A												
AIR DRYER (EXISTING)	20A										100A/3P	ELEVATOR (EXISTING)	
SPARE	20A												
LEFT SIDE SUB TOTAL		0.0	0.8 3.6	0.0	0 1.0	Ī	•						
RIGHT SIDE SUB TOTAL				!	•	0.0	0.0	0.0	0.0	0.0		NOTES:	
CONNECTED SUB TOTAL		0	0.8 3.6	6 (0 1							CIRCUIT BREAKER TYPE:	
FUTURE ALLOWANCE		0	0 () (0 0							S=SHUNT TRIP	
SUB-TOTAL		0	0.8 3.6	6 (0 1	1						G=GFIC	
DEMAND FACTOR		1 NE	C 1	1	1 0.8							L=LOCK ON HANDLE	
SUB-TOTAL			0.8 3.6	6 (0.8							H=HACR TYPE	
TOTAL PANEL AMPO		5.2										A=AFCI	
TOTAL PANEL AMPS		14.4											
MAIN BREAKER MCB						VOLTS			120 /	208			
NEUTRAL	(X)	100%	() 150%	() 200%				3				

power general notes

A. NEW CIRCUIT BREAKERS INSTALLED IN EXISTING PANELBOARDS SHALL MATCH EXISTING BREAKER TYPES AND AIC RATINGS.

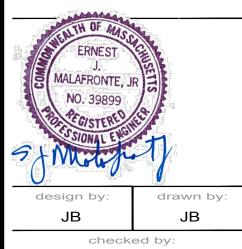


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checked by:

EM

approved by:

EM

Taunton State
Hospital
Food Service
Improvements
EHS1801-TR1

60 hodges avenue taunton, ma 02780

keyplan:

			north
rev.:	date:	issued for:	initial

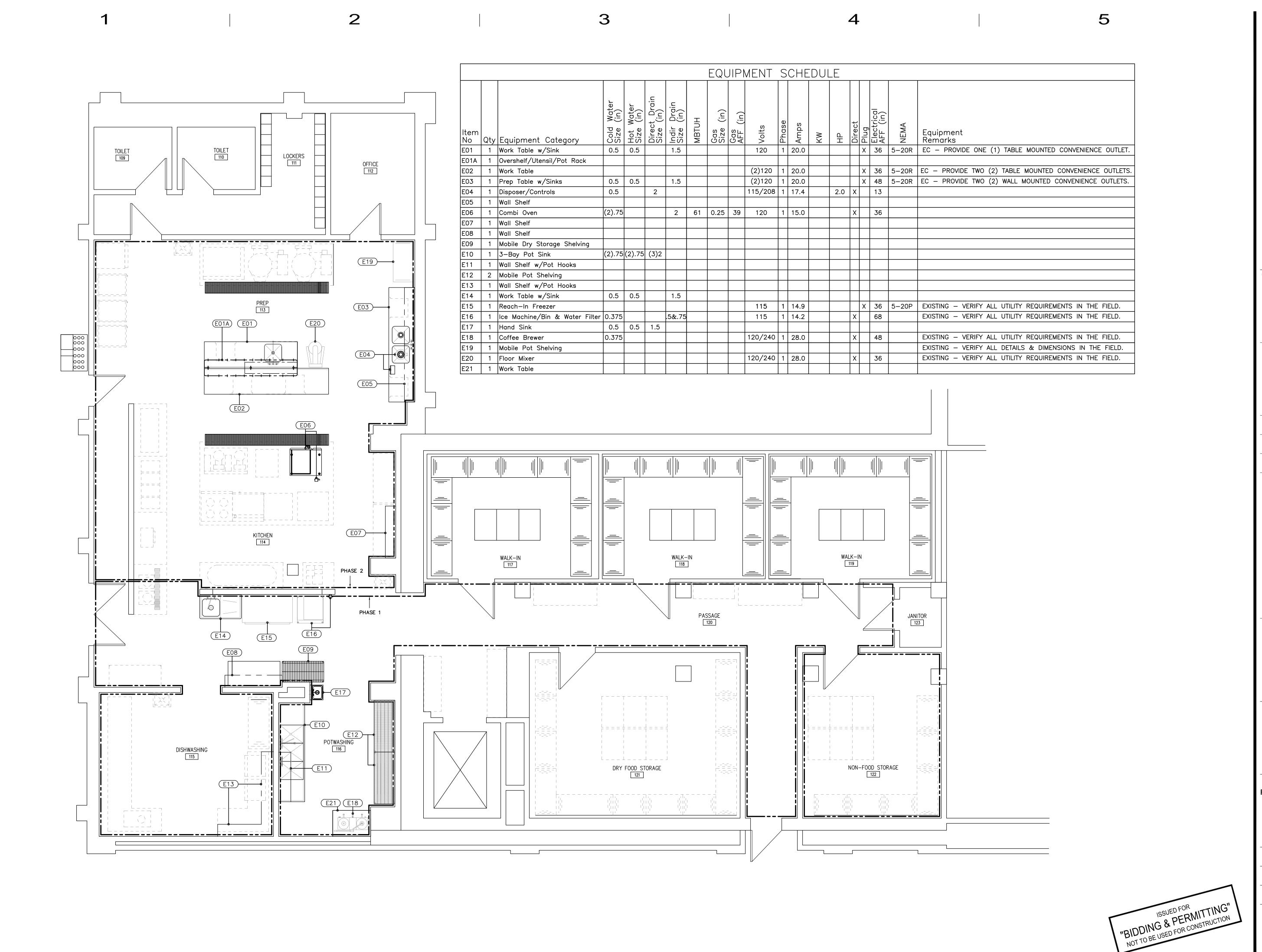
electrical panel schedules

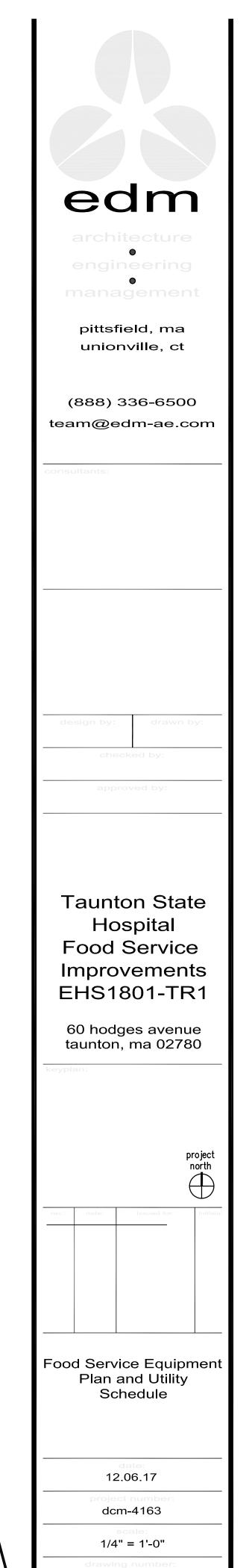
date: 12.06.17 project number dcm-4163

> scale: as noted

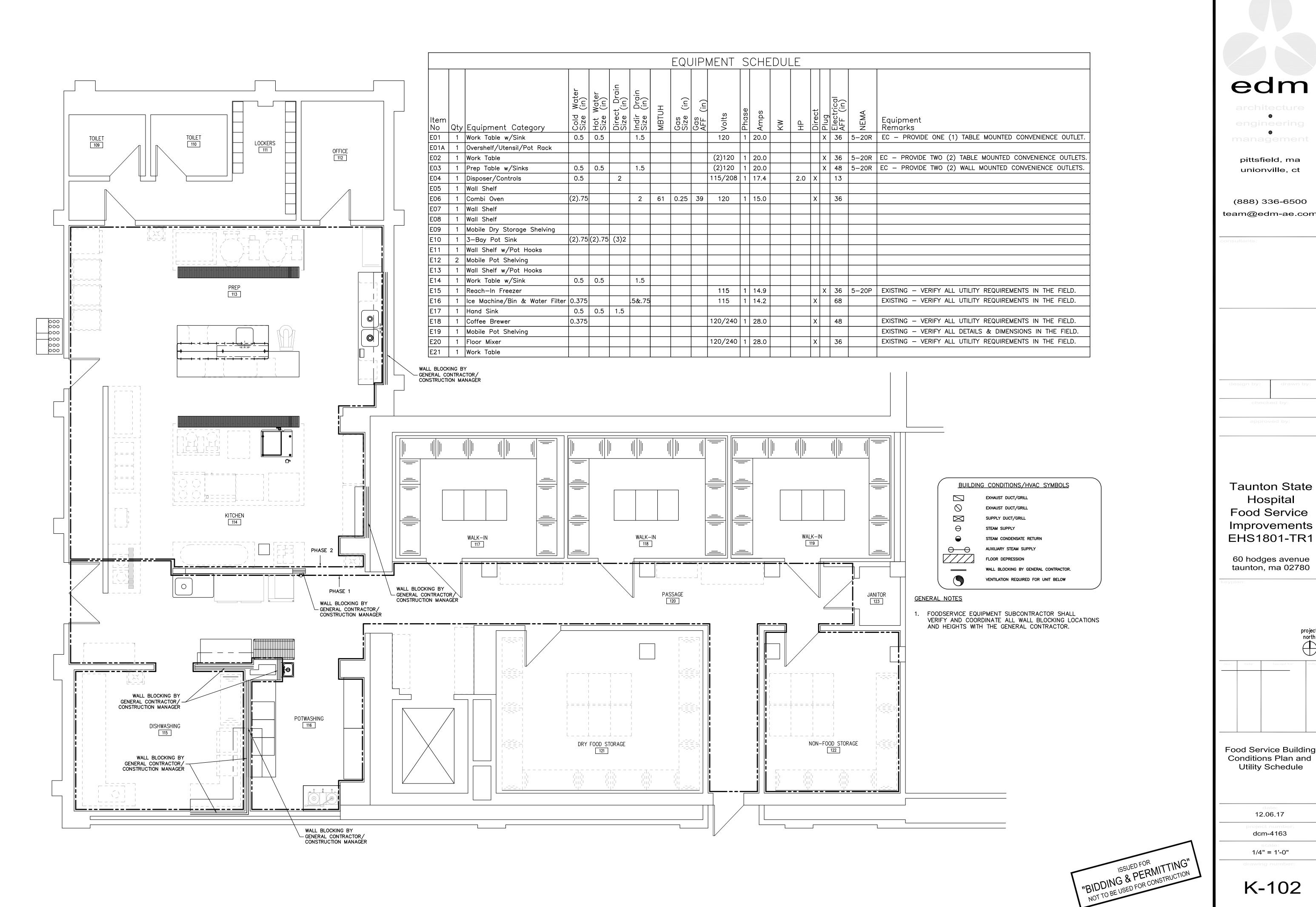
E-201

drawing number:





K-101

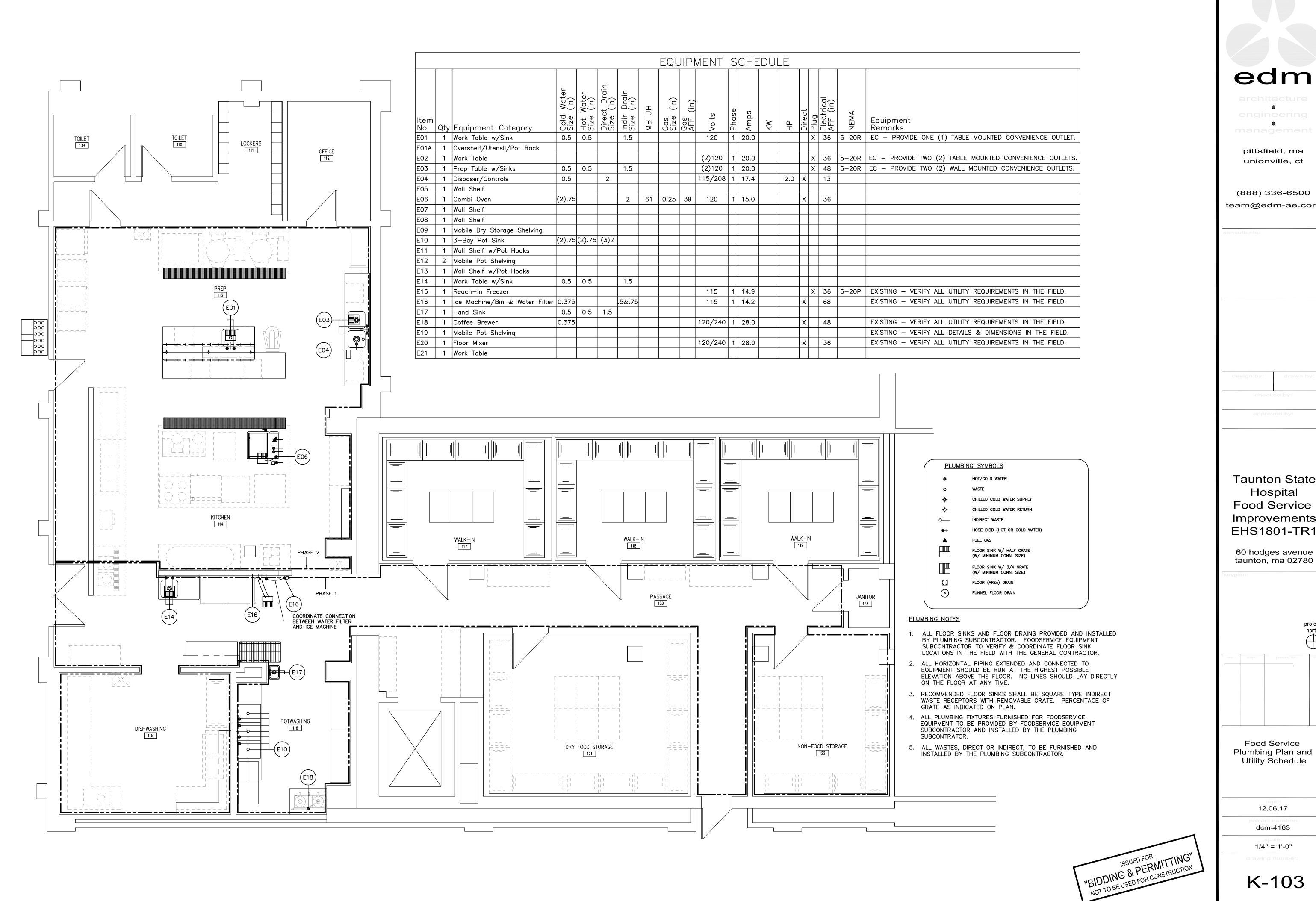


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team@edm-ae.com

5

project north



3

edm pittsfield, ma unionville, ct (888) 336-6500 team@edm-ae.com

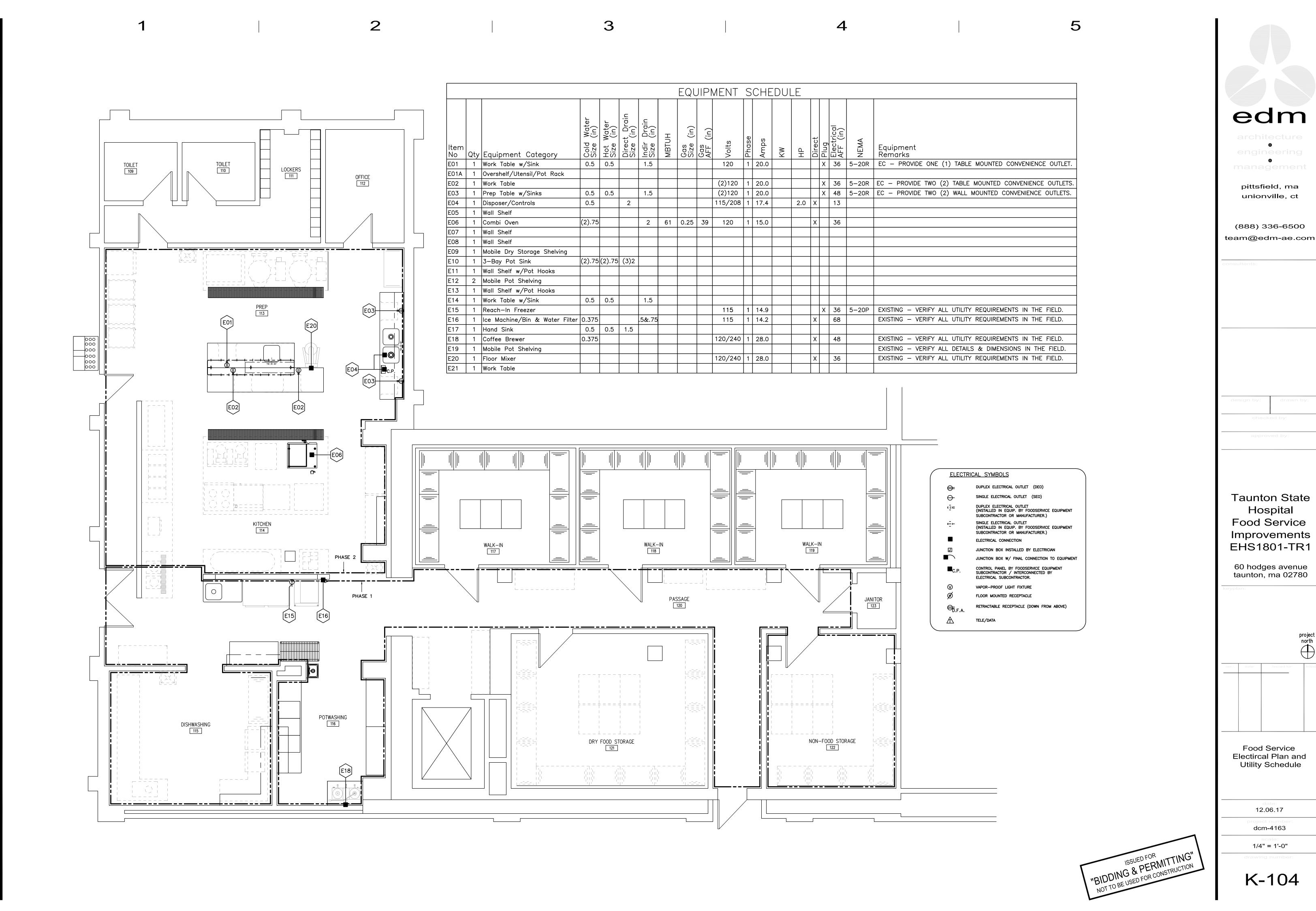
5

Taunton State Hospital Food Service Improvements EHS1801-TR1

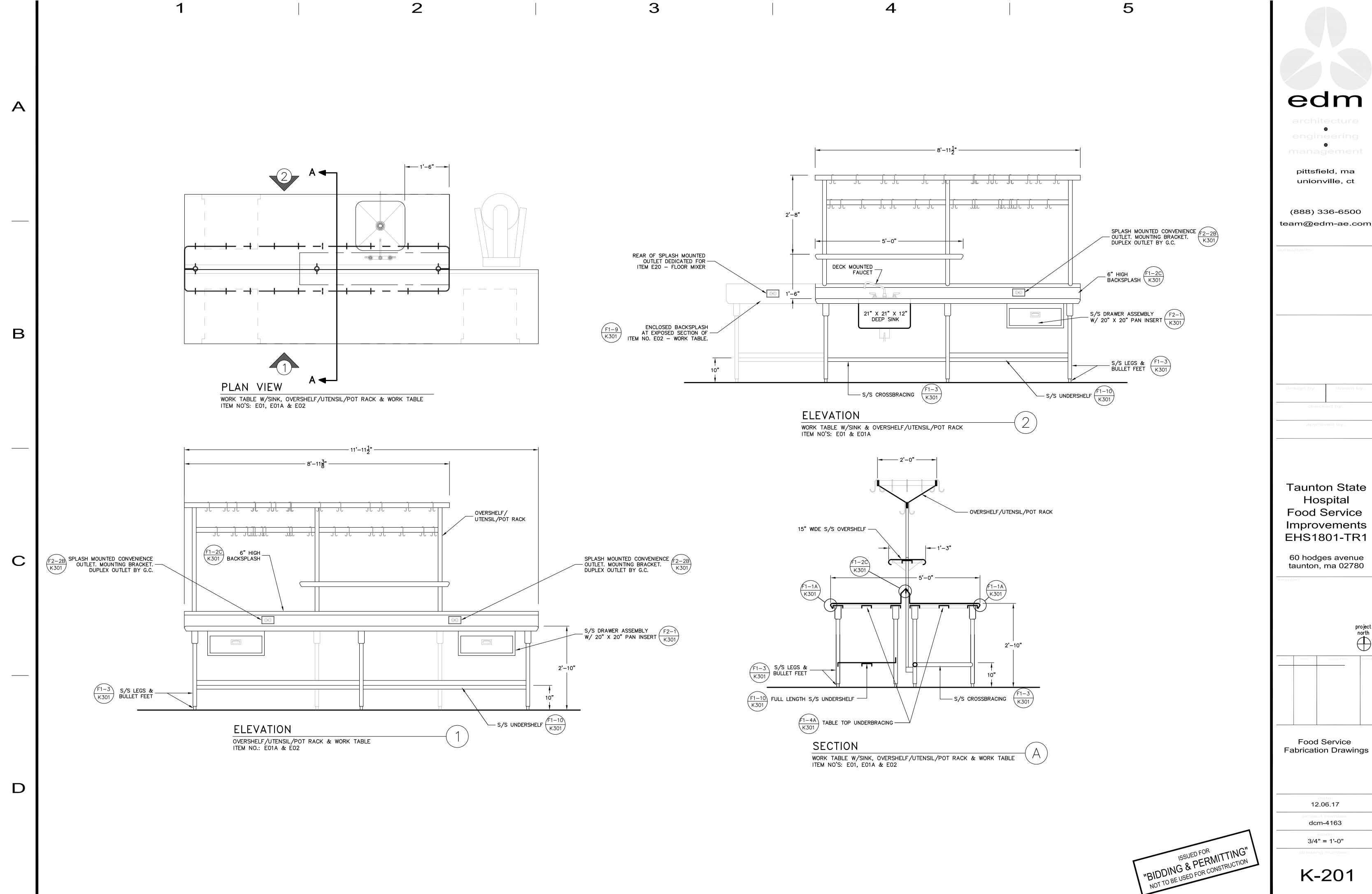
taunton, ma 02780

project north

Plumbing Plan and Utility Schedule



project north



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K-201

